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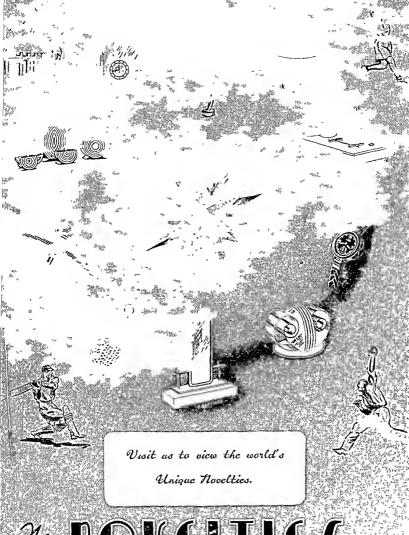
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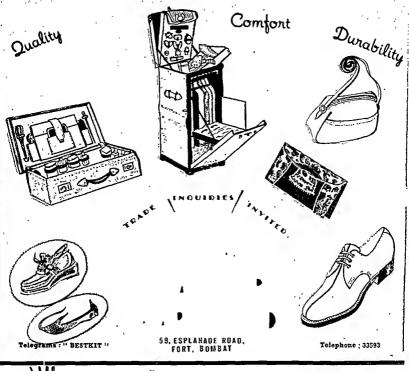
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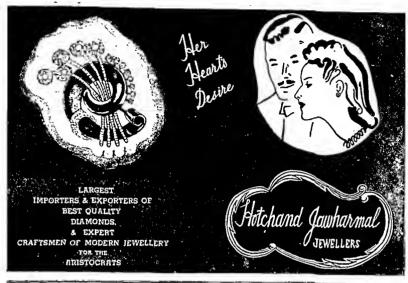
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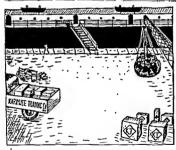
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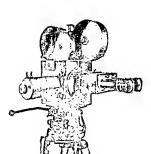
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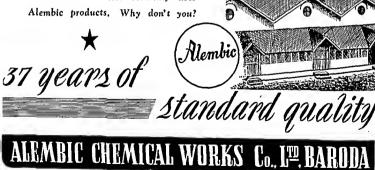
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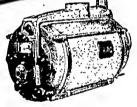
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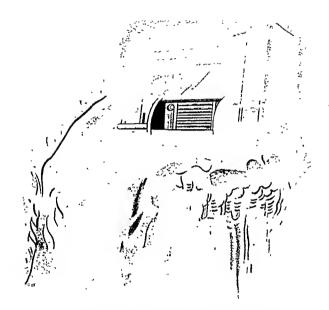
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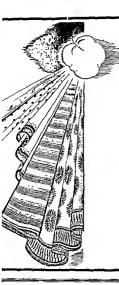
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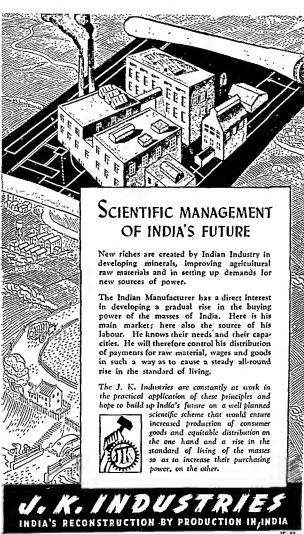
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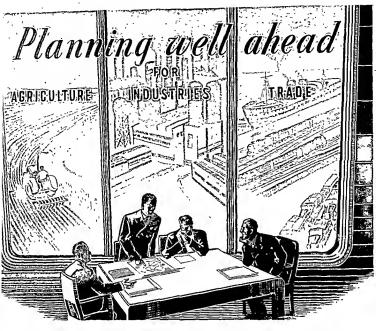
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Y. A. FAZALBHOY, one of the Heads of the Fazalbhoy group of Companies, prominent in the Radio and Cinema trade, has taken a leading part in business and industrial activity in general in the country, and in particular in setting up various organisations connected with the Film Industry. Member of the British Film Institute, British Kinematograph Society and the Society of Motion Picture Engineers, he has been keenly interested in promoting Adult Education and in Visual Education through the Film.

The House of Fazalhhoy in recent years has played an important role in activating Indian business. It has planned and established zonal Trading Companies throughout India, and through them linked leading Indian and foreign interests. It has also set on foot a new Company. Development Engineering Associates (India) "working in co-operation prominent Planning and Research Engineers abroad, thereby starting a large planning movement in the field of engineering in the country.

#### EXECUTIVE EDITOR:

H. D. SETHNA, M.A., is in charge of the Public Relations Department, The House of Fazallihoy. Till recently, he was Professor of Cogic and Philosophy, Wadia College, Pooua. He contributed considerably to the progress of this institution from its very early days. In 1931 he founded the "Orient", a quarterly journal of the Indian Interary Renaissance, of which he was also the editor and which, within a short time, won an important place in Indian magazine journalism. In 1937 he was at the Cambridge University for research and worked there under Dr. A. C. Ewing. His academic work of over ten years developed a critical approach to Western ideas and theories in the fight of Indian thinking and its ideals.

He is the author of "Indian Horizons" (Padma Publishers), "Struggling Heights" (Karnatak Publishing House) and is the co-editor, with Prof. A. S. Wadia, of "Literary Interludes" (Oxford University Press). A constructive vision, idealistic yet turned towards a concrete realisation of values, characterises his writings which reflect his close study and experience of the cultural and political movements in the country for the last two decades.

#### SECRETARY, EDITORIAL BOARD.

C. M. MARATHE, v. COV., F. R. C. S., (Lond.), sometime Professor, S. P. College, Poona, and Khalsa College, Bombay, is at present Professor of Economics, Wilson College, Bombay. From 1934 to 1942 he championed the cause of Junior Grade Business Education and had an important share in the growth of the S. P. M. Institute of Commerce, Poona. He has to his credit considerable journalistic work, dealing in a refreshing manner with various subjects, Geography, Banking, Economics, etc.

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### FIRST PUBLISHED IN INDIA, JANUARY 1946

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## CONTENTS

	PREFACE	***	***	••	••	Y. A. Fazalbhay			
	INTRODUCT	ION			•••	H. D. Sethna, M.A.			NI
	A NOTE ON	EDITORIA	AL WORK			G. M. Marathe, M. Co	m. r R.G.s.		
							(Lond).	2	CVIII
Plann	ing								
	Organise I by t	he Edite nat	floasil.						
	OBJECTIVI	S OF PL	ANNING			J. K. Mehta, M A ,		• • • •	1
	PRINCIPLE	S OF G	ANDHIAN	PLANN		S. N. Agarwal, M.A.			9
	REGIONAL	PLANNI	NG			Bool Chand, M.A., Ph.D	(Econ)		14
	PLANNING	AND PO	OPULATIO	N		D. G. Karve, M.A.		•••	19
	FULL EMP	TOANEZ.	T AND EC	опоміс					
	STABILIT	rv				T N. Ramaswamy, M A	., в sc., (Ес	con)	24
	MONEY -	ITS UTIL	IZATION.	IN					
	EXPANSI	ONIST P	LANNING	•••	•••	D. R. Samant, M A		•••	31
	PLANNING	FOR SM	ALL STA	res	•••	K. V. Rao, M.A , M Litt			36
A ania	.11								
Agric		ha Wilconial				rof. R. Vishmeswar Rao M			
	LAND POL		***			Gyan Chand, M A., Ph.			42
•	AGRICULT			•••	•••	Anwar Inbal Qureshi,		•••	72
	AGRICULI	UKAL, PIL	MARCE	••	••	(Lond), Ph.D. (Du			48
	CROP PLAN	NNING			••	V. M Jakhade, M.A	•••	•••	56
Indust									
mousi	Ty Organised by t	the Wilteria	. Vone						
			USTRIALI	SATION	IN				
	INDIA				• •	S. K. Muranjan, M A.B S	c . p. sc.(L	ond.)	73
	PLANNING	OF HEA	VY INDU	STRIES		I' C Jain M.A., M. Sc. (			79
	PLANNING	OF SMA	LL INDUS	TRIES		V. G. Ramkrishna Ayy			88
	NATIONAL	ELECTR	ICAL PLA	NNING		M. Subramanian, B.F., 3			94
	PLANNING	OF FIL:	M INDUST	rry		G, Ramabrahmam			100
	COMMERCI	AL BANK	ING		•••	U. S. Navani, B.A., B.Sc.	(Econ.) (Lo	ond.)	106
m									
lransp	ort & Com								
	PLANNING					R R.S. (Lord J. Railway Box			
	PLANNING	OF KA		is INDIA		J. E Castellino, B.A., B. P.R.E S., (Lond.)			115
	ROAD DEV	ELOPMEN	NT IN POS	T-WAR E	RA	T R. S. Kynnersley, o			
						ACGI, M INST CAE			122
	THE FUTU			IPPING	••	H. M. Trivedi, r.sc., (Lor			
	PLANNING	OF AVIA	MOITA	•••	•••	M R. Dhekney, M.4., M	Com .		132

#### Education

	Organised by H. R. Bhatle W.s., Rural Education Officer	. Bula Plocation Trust	
	PLANNING OF RURAL EDUCATION	H. R Pletis, M 4	149
	PRIMARY UDUCATION	A. N. Basu, M. v. (Lon. 1), M. 1. 1.	
		(Winnells Call	14
	SICONDARY EDUCATION	W. V. Phyc. u v	14
	UNIVERSITY EDUCATION	N. K. Solfbant, M.A	16.
	TRACHERS EDUCATION	E. I. Shrimsh P. s.	10
	PLANNING OF TICHNICAL EDUCATION	A. V Nath, use I'mg (Lord	
		1:1C 11:11 .	17
Social	Western and Heath		
	tingamend in the Bedram Media is a , rais Professor of ; world Referey Combay	Social Malwig Admira etystica. Para İşviyinin ad	
	ARCHITECTONIC PLANNING	II 5 Billimotis Akt ba atta	12
	PLANNING COMMUNITY LIFE	Behram Melita u v. eli b	17
	INFANT AND CHILD CARE .	Mass K Il Cama, wa was rhp (Mich )	19
	LABOUR WELFARE	M V Moorthy, pa, sh r	254
	ROLE OF WOMEN IN FUTURE INDIA	Shrimati Karnaladevi .	21
	NUTRITION	Dr. K. S. Mbaskar, MA, \$ 20, 18 in. (Born)   p. e. ii (Lond), p. e. n. at. (Camb.	) 22
	THE RADIO AND SOCIAL WILFARD IN		
	FITURE INDIA	Y. A Parathhoy	22
Cultur	e		
	Organised by K D Serbns, p s. (tiern ), Authorital	Jameint, homier,	
	GENERAL REFLECTIONS	K D Sethus, a s (Pom)	23
	CULTURE AS AN EDUCATIONAL IDEAL	A. R. Wadis, B t . (Bom & Cartale)	
		Rar et fam .	24
	THE INDIAN DRAMA AND THEATRE OF		
	THE OUTLOOK FOR INDO-ANGLIAN		24
	LITERATURE		
	THE MARCH OF INDIAN MUSIC	Dalle 11 Person (O.1)	25.
	SPIRITUAL INDIA AND SRI AUROBINDO	Anilharan Roy, M.A. (Philosoph)	26
		& English ) (Call a t. (Call)	20

### PHOTOGRAPHS, MAPS AND CHARTS.

DESCRIPTION.		PAGE
PHOTOGR	RAPHS	
Community work during harvest time	B. F. Ferrelra.	11
Mechanised Agriculture	Volkart Bros.	44
Machines & large-scale agriculture	-do-	45
View of a weekly bazar	B. F. Ferreira	50
Rich Harvest	-do-	51
Inside view of a modern factory	M. Desat	75
Work at machines	B. F. Ferreira	80
View of an up-to-date laboratory	• do-	B1
The Bullock - Cart Transport		128
Docks		
Architectural Harmony	B. F. Ferreira	182
The Nataraj	M. Desai	235
MAP	S	
India's Geographical Wealth & Agricultural p	lanning	15
India's Mineral & Industrial Wealth		17
•		
CHAR	TS	
Possibilities of extension of cultivation	Mr. I Paulose	58
Comparative study of yield of crops	-do-	59

### PREFACE

E were in the midst of the war days but it was evident to all that the tide of events was slowly but surely turning in favour of the Ailies. The army of the enemy was facing retreat on all fronts and although the fulfilment of victory would take time we could see it on the horizon. Nevertheless, it would be a hard-won victory. After iong trials and suffering, men had again begun to think of peace. It was at such a time that "15 Years Ahead" was first thought. of during a conversation between Mr. H. D. Sethna. 10W the Executive Editor, and myself, centring round the urgent questions of what we should be doing for our people in the coming post-war years. In the moments of crisis it was the common man, the nasses, who had really fought and saved the world for iemocracy. In India also, the common people had contributed their might and shouldered their own share of distressing hardships in the dark war years, All these sacrifices were made with the realization that the war would bring in a better world. It was natural to ask, what sort of a better world? For, if the common people bore the brunt of the struggle. surely all our efforts should be made, above all, to dve them an opportunity to think for themselves and to make their own lot far better than before.

In an inspired moment President Rooseveit had expressed the highest aspirations of humanity in the 'amous declaration of the Four Freedoms. It was because the masses were not free from want and abject fears which oppressed them and were not free to think for themselves that Europe could breed the lust of war and its mad fury. Even with victory n our hands, we would reap the benefits only if we could relieve the common man from oppression and want and give him the simple elements of the Four Freedoms. It was difficult to say that we had made any preparations to bring them into force. The achievements of victory might bring more wealth to one country or another but that would not help the 'dumb millions", unless we had worked out ways and neans by which we could direct it to the betterment of their lot. Looking at Europe we found that aithough nations had made heroic sacrifices, there had been ittle change of heart and outlook. The masses were still ciamouring for better living and security. In india, so backward and undeveloped, conditions were still worse. I had been deeply impressed by the strikng and dismal contrasts in the streets of my own town. What was prevalent in Europe was acute here. Going through the streets of our city would make it evident to any one, for here as one passed, one could see hundreds of poor people living their life on the pavements and none being aware how they lived and what they did; and on the other hand, the rich provided as it were by n favourable destiny with all they wanted. Poverty in India was incomparable, reducing people even below the bare subsistence level. India had contributed considerably to winning the war but as things stood, so long as men were left in poverty and consequently in abysmal ignorance, there was no hope for a brighter day.

It was this appalling situation which we were forced to discuss in face of the prospects of peace. We could meet this situation only by thinking out first the essentials of a constructive and a deepvisioned planning. Whatever business experience I had, I was eager to use to advantage for setting up such a project of thinking. As a creative writer, Mr. Sethna would bring to bear on the work both his knowledge of Indian problems and his imaginative ability in the preparation and writing of books. Further, as one who had shared the fervour of the patriotic movement for the common people, he would utilise his experience and inspire the urgent necessity of carrying out the task. The Indian youth were a large part of the patriotic movement. As a professor In the Bombay University, he was in close touch with them. Our youth with their bold aspirations would form the vanguard of the future. It is they who must prepare to think for themselves and frame solutions of the difficulties that will attend the postwar period. Mr. Sethna's qualifications, my zeal for organization and the idealism which we both had in common - these at once brought to life the idea of an effort which would make the youth and the people weigh the present abject conditions in our country and arrive at major decisions by pondering over the several difficulties and problems of planning a better world. Such an effort was the quick framing of the preliminaries of "15 Years Ahead" - thinking forward into the future and discussing its urgent fundamental issues in all their deep complexity and their tar-reaching influence in the pattern of national life.

As a businessman, I had found that the greatest of difficulties became very simple when one tried to plan a solution. Planning makes one go into fundamentals and into details and once you know the small details you immediately have adequate knowledge to begin and execute the work in hand. It is indeed a trite saying that "if yau take care of the pennies, the pounds will take care of themselves," but without such a procedure you cannot carry out any difficult venture. In a vast work like planning

the future of our country, we must first have an idea about the details, the small pennies, and when we have these, the larger composite picture would soon grow before our mind in course of time. We could make a beginning only by studying the details of every phase of national activity, began to question men to join us in our exploration of facts and ideas. Soon we found that we were gathering response and "15 Years Ahead" grew into shape as the answer to these questionings. It has taken us considerable time and labour to build un the book but it had to be done. We had national opinion behind us. Before even the Government took steps, it was Jawaharial Nehru who, as Chairman of the National Planning Committee appointed by the Congress, drew up, for the first time, a planning programme for the country.

Pianning is not a mere phase, it is the next logical step in the history of events. In this war we had witnessed the most unexpected take place,-the victorious air-battle of Britain wher. Britain was unprepared - the friendship of England and Russia, countries with conflicting ideologies - the use of the strangest aircraft, the pilotless planes - and finally the culmination of the most unexpected, the Atom Bomb, a war weapon becoming an instrument for changing the very destiny of mankind. The consequences that will follow the use of it are incalculable but there is no doubt that it opens up a new era in history, Research has grown apace in the world, and although the production of the Atom Bomb is at present a secret in the hands of a few nations, there have been started research centres on its structure and activity in every country. It is possible to imagine that within a short term of time the making of the Atom Bomb would be discovered by many countries other than England and America. Under these circumstances, in future, the employment of this new weapon will revolutionize the world's outlook towards violence and armaments, In comparison with its power, the present vast-scale armaments appear futile, the army and navy seem poor efforts. There may come a time when other instruments of war may lose their significant role, the manufacture of armaments and the organization of the army and navy may fast decline. Further, the use of the Atom Bomb brings terrific destruction on an unimaginable scale so that if several nations take to it, violence, even within a very brief period, might lead to utter annihilation of the human race. The practice of war will thus become suicidai. Such an amazing prospect of utter annihilation by the new mighty force compels a reorientation in life. - a turning away from violence to a development of the arts of peace. It is evident that these consequences will take time to be understood and developed but they are bound to come, forcing men to occupations of harnessing power which will help humanity rather than destroy

But the fear of the Atom Bomb and its devastation is only a negative preventive of war. It does not signify a radical transformation. It is true that

there may not be for a time a fostering of violence by arms. But this very peace can be utilised to breed selfish interests and class slavery which are the main causes of war. Trade and commerce may flourish and fatten on the blood and toll of people and rouse discontent and hatred of man for man. We can serve peace only if we can remove these root-evils. The real logical step, the true reorientation would be a genuine planning on altogether new lines. -- an attempt at providing such conditions as would leave as little room as possible for discontent and inequality. These conditions can be ereated if we can offer full employment to the peoples of the world. How can we attempt it unless we have immense resources in hand? In this great task of the future, countries with large resources will, therefore, play an important role. It is thus that in the balance of events India with its vast material and man-nower bids fair to become a great force in the world. Now as never before in any moment of history, India stands out in the most favourable position. There are, however, immense obstacles in the way. - the domination of the British Government and the undeveloped character of our industries and our people. But in view of the logic of events in the world we are certain that we would make a bold mark if we could plan every phase and aspect of the nation's activity and speed up the country's progress.

"15 Years Ahead" has been prepared as one of the attempts to answer this demand. But it does not make the pretentious claim of being in itself a complete answer. It is a recognition of the logic of events and makes a beginning in providing the necessary information and opinion to pave the way for the actual planning. There have been so many plans offered, and to talk of planning has become the fashion among intelligent people. Some of them respond to an emotional appeal,-political slogans and high-flown promises. The two major types of planning that have gripped the public mind are political and industrial. Both of these suffer from severe defects, the one from narrow party ideologies, the other from the evils of vested interests. Public-spirited citizens have already issued warnings against them, for, the disastrous consequences of such planning have been crystal-clear in Europe. The dangers of imposing a cut and dried scheme of things on a vast mass of humanity like India are apparent, and so, though we must catch time by the forelock and shoulder the responsibility of the planning period, it is necessary to think out difficulties and problems first, rather than rush to present a too easy project of planning. Planning future India is a Herculean long-term task. We make no pretence even to give an idea of what shape planning must and will take in our country. In this book we only want to present a study of the different factors which will go to influence certain directions in which planning will take place. Ours, we accept, is humble task and we shall have succeeded if we can make a beginning in helping the Indian people to think for themselves in the age of planning.

y. A. Fazalbhoy

### INTRODUCTION

of deep convictions, of the shaping of the idea and the outlook behind its writing, and of the milieu in which it arose and quickened. Books, whether they are fashioned by one mind or composed out of the thought of many people, are like the tissues of a living personality; they emerge out of vital factors intertwined with and influencing one another it is such factors that give significance to a book. We have taken long to gather and sift the material of "15 Years Ahead", but this arduous extended process is only the outer shell of all that has inspired the making of it, — our principles on the one hand and an active environment on the other.

"15 Years Ahead," like any other effective present-day writing in India, is born out of reflection on the dark hours of the War and its great motives to save democracy and the liberty of man; and in our own country, on the bitter struggle for freedom during the last half century. Reflecting on them, we are forced to the conviction that it is necessary to be mentally equipped in order to deal with the confused mass of facts and purposes in the world and all around us. We may best begin, here and now, by considering the problems and difficulties of our own complex future. We must be at conference with ourselves to settle some of the far-reaching Issues that govern our welfare and determine our progress.

Such a conference, a compact gathering of organised discussion, is "15 Years Ahead". The urgent call for mental preparedness is a compelling moral pressure behind its pages. It has something even of a moral inspiration when it is felt as an instrument for meeting and, if need be, changing the wide circle of influences which the war has set up. The uprooting of humanity, the blasting of high ideals and the tyranny of arms make up the exciting pages of recent history. As we turn to the writings in "15 Years Ahead", we enter altogether a contrasting field, - a province of quiet constructive thinking. As we dwell on the contrast. we at once feel a new deep conviction rise to the surface. It is the belief that if we are to win and maintain peace, we should think out the planning of a strong and far-sighted structure of life for the whole country. Admittedly, the peace we want in India must be such as would give real freedom. Our countrymen may have still to fight for it. To raise themselves to their full stature for the struggle, they must by a vigorous utilisation of their resources and genius, build a powerful nation. Further, ever if they obtain the liberation they long for, tomorrow or in the near future, they must, through planning, provide such conditions as would make it last. And finally, if there is to be a sustained peace, it has, in every phase of it, to hold sacred the dignity of man and his labour.

These convictions give us the attitude with which the book is prepared. But the subject itself, the planning of future India, is as important as that attitude. The subject is placed against an actual background - the Indian milieu - the amazing awakening of India to national ideals and a revivai of her powers and potentialities. It also consists of her absorption of the recent influence on her of Western industrialisation and scientific development. The elements of this background and their contribution to India's progress, - an attempt to weigh these in the balance is here necessary to see the place of planning in the historical course of events. Such a perspective at once puts us in the very stream of ideas about ways and means of reconstructing the nation's economy and life. These reflections have gone to frame the essential purpose of the book. We cannot, however, easily discern its meaning. It is one thing to call a conference of expert thinking. - quite another to clarify its outlook and method. We have to define, and if need be, justify them, for it is by its outlook and method that "15 Years Ahead" will have an important voice in the future.

1

### THE FUTURE OF INDIA

The problem of planning for India is a part of the larger problem of the resurgence of the Indian spirit long before and even during the dark years of the War,-the Renaissance that has been growing in this country for half a century. The historic Renaissance in Europe was indeed a momentous thing and is the fountain-head of the Western revolutionary forces. It is true that the Indian resurgence is the result of the impact on us of these forces and is thus connected with them. But in meaning it is different from the Renascent European Movement. It is, however, not a mere renewed study of the old Sanskrit texts and their influence on the people. It is really a re-birth, an awakening of the Indian consciousness and spirit in a new vital form actuated by a living contact with the West. It is a bold leap forward, comprising all the economic,

scientific and cultural forces of progress, in its true sense. Such a wast re-birth cannot be quickly achieved, it is not the complete result of any one influence or another but a continually growing process. In order to push it forward in this pregnant hour in the wake of victory which is India's also as much as of any other country, we must understand its full meaning.

Two things are necessary to understand lt. First, a correct self-view, a true vision of what India stands for and what she has meant to herself. Then, a balanced perspective of the assimilation of the powerful modern forces a mechanised civilisation has let loose upon us. We look upon the Indian heritage as old and decrepit, and so obviously consider the Renaissance only in terms of the mere present. That is because we have not clearly grasped what the heritage has meant to us, and further because we do not know how a Renaissance grows, It is true that so much of the past is outworn, but that is just the dead past. The real Indian heritage is still in us, in our veins, it lives because it has never been dead. Over five millennia-almost an incredible age -- its living continuity has persisted, Westerners think of our heritage only as ancient temples and tomes. These are a part, an extremely glowing and interesting one. But the heritage is much more than these, a composite influence penetrating profoundly into the very structure of our life and habits. Our institutions even today express it and are a testament of its permanence. It is this permanence of the Indian spirit, the survival of which over a vast span of ages is present in all that we work and live for and love, that makes the Renaissance possible and understandable. For the Renaissance, a re-birth, is only possible if there is something significantly permanent in the Indian process.

The Renalssance has not been a sudden and isolated result, one single achievement, but a progressing and vitalising experience. These first fifty years of its growth, though thrilling and momentous in their own way, are but a prejude to it. They are of gigantic proportion to us, for they comprise the very life of our generation. Nevertheless, they constitute a negative period, as compared to the constructive future of which we have only a remote glimpse The two World Wars within which our generation has been caught have been of the greatest importance to us, for the very impact of such two cataclysmic changes has acted as a powerful leaven to lift our people from the morass of inaction. The Renaissance may, so far, be divided into two periods, the first starting even before the last war. from 1906 onwards during the days of the Bengal Partition upto roughly 1927; the second, from 1927. the zenith of the Gandhian Movement and the rapid strides of nationalism upto 1944. In the first twenty years, the Indian energy was given to the immediate task of freeing the mind from a sense of servile imitation of the West, of fighting the denationalisation of the best of Indian blood. In the second period, Indian nationalism came into its own and made Itself recognised by England, so much so

that during the War this recognition was openly expressed in the Cripps offer to India. To make the periods striking, they are put in political terms, but the Renalssance, as we all see around us, is much more than politics, for artists and poets, economists and scientific thinkers, saints and yogis, all coliaborated to reawaken the Indian spirit.

We are at the close of the longest and fiercest war of this century. Together with the sacrifice of her brave men, India provided war equipment and material to the Allies in such a manner as to become their leading arscnal. With these amazing powers of production in hand, the third period begins nowthe scientific harnessing of the vast capacity of India's mind and man-power, and of her mechanical, engineering and industrial potentialities. It is the most revolutionary and constructive phase. For the first time, India is facing the problem of a new worldthe problem of planning the immensely different future that is to come to us. Shall it and should it lead to the same kind of consequences as have befallen the western world? To decide this question we have to interpret clearly the significance of this new phase for India The scientific spirit which was growing for the last ten years now assumes a vast proportion and is fast spreading from one end of the land to the other. The recent War has made it a mighty force, driving into us an awareness of the madvisability and danger of leaving it scattered and utterly rebellious. Planning must therefore constitute the new important step forward and withal a gigantic step. How are we to plan this new period?

First of all, we must see that the rise and growth of the scientific spirit is itself a phase of the progressing Renalssance - a further testing and unfoldment of its powers. It is true that, so far, the Renascent movement has been literary, religious and political. But a true self-view will soon reveal that the Indian heritage is much more comprehensive than such a movement. It includes within itself accurate scientific experience and use of rationalised methods in diverse branches of activity. Such experience and method are written boldly In the story of India's past, in the development of such sciences as Astronomy, Physics and Engineering in the long march of civilisation in our country. Historical records tell us of planned towns. of engineering projects, of a balanced and sound economy. We could not have had these without a developed scientific mind and outlook. Industrialisaton and mechanisation, as we find them today, were not there in accient India; but they are no other than the development and application of the scientific snirit and method. And a race which has had an experience of scientific experiment and instruments will not find it difficult to adapt itself to these new processes and in time master them.

The question naturally arises: will a mechanistic civilisation shape and plan the India of the future? We cannot wholly and directly answer in one way or the other. As industrialisation has already begun, and as the scientific experience behind it is not utterly

allen to the Indian consciousness, the mechanistic civilisation will surely grow. It not only will, but ought to grow. India has clung for centuries to an old outworn economy. It has been the cause of an incomparable unproductivity of land. Vast tracts in the country lie fallow, and so n large part of the people are unemployed, exceeding the total number of the unemployed in the world; Our mind revoits against this abject state. — our resources lying like a stagnant pool and the masses sunk in utter dark inaction and despair:

"Gangs was sunken, and the limp leases
Wasted for rain, while the black clouds
Gathered for distant, over Himovant,
The jungle eronehed, humped in silenee,"\*

Inasmuch as we shall revive the progressive powers latent in the race, we shall reject the dead quiescent temper and life, bound hand and foot to an old and moribund agriculture. The only instrument by which we can transform the whole seene is a long and persistent drive of industrialism. It is the largest hope to the planner for raising the standard of living. As we look all round us, at England, at U.S.A., at Russia, and at countries nearer East, we have convineing testimony to justify this hope. And we do not need any statisties to see that the race which can manufacture the most and the best is the one that has eome to the top. For backward countries like India, industrialism will not only bring employment to the people but also put them on the way of attaining an economic equality among nations of the world, It is indeed heartening to find that many planners in India have understood its multifarious benefits and have already laid the strongest emphasis on it, eharging both the Government and the Indian leaders with the "sacred duty" of carrying it out,

There is no wonder that this should be so. For, as Sir M. Visvesvaraya, the eminent economist and practical thinker, has often polated out, the Government has all along discouraged and obstructed it and our leaders on the other hand have found themselves helpless before the obstacles the Government has put in the way. Even now it has not drawn up a sufficiently efficient policy in proportionate response to the demands of the country. Industrialisation is indeed a complex phenomenon, rendered all the more complex by the specific needs and occupations of our people. In drawing men into the vortices of a pressing collective activity, it brings about immense changes, and churns, so to say, their very lives. To meet these changes and make them yield sufficient advantages to those who sweat and toil, an able and efficient administration is necessary. Without it, in this country where three-fourths of the masses are illiterate and have no voice, the future of industrialism would be dark and gloomy, more than anywhere else. Further, the predominant rural occupation of our people calls for a certain adjustment of it to agriculture and a balance between the two. To carry out this adjustment in a proper manner, we shall have to set afoot a revolution in agricultural methods, - the use of

mechanisation on a large scale. Industrialisation, together with mechanisation of agriculture, will recast the entire economic structure, galvanise the life of the peasantry and the urban people and lead to a modernised and balanced economy.

A proper planning of mechanistic progress will bring with it a regular series of new forces, instilling a sense of mastery into the Indian consciousness. We find it prevailing to an extreme degree in the West. in the manufacture of great ships riding the ocean. in the making of gigantic plants of machinery, we witness a fostering of immense energy. If India has been down-trodden, she needs as an urgent correclive the opening of her mind to these powers. More than any other nation she resembles Russia of the early days, hemmed in on all sides by obstacles and difficulties. If Russia could fight mountainous odds and pinn, so must India at the present day. But while we must help the planning of mechanistic development and make it work to the widest extent, we have to take note of the warning from the West. The age of such development has been the period of the two World Wars that have ravaged mankind. There have also been widespread oppressions and commercial exploitation. No plaaner in India would like to repeat the mistakes of the West. Even the West is stirred and alarmed by them and men like Beveridge and Bertrand Russell are raising their voice for instruments of self-correction. It is the way we plan the new industrial and mechanistic growth, the directive, that matters, Given the wrong directive. it is difficult, even impossible to retrace our steps! When we plan, we shall have to see that we are planning not for death but for life, with all the aid of civilising forces at our command.

We should be thus out to shape not merely a technological revolution in the country. Planning is an aspect of the Indian Renaissance, falls within it and so we shall have to help fully the rebirth of the life of our people, their ideals and their happiness. In the growing movement, industrialisation will be but one factor. It will have to reckon with other equally important elements. One powerful element is the developed spiritual culture of India. Had It been merely other-wordly in the extreme sense, as Westerners make It out to be, it would have been swamped by the Influx of allen forces that have poured into the country. But it has persisted throughout history, supervening over the whole pattern of social and economic life. It has persisted in the heyday of material progress, in the building of towns and empires. Soldiers like Shivaji and statesmen like Akbar have claimed from It their inspiration in their work for humanity and material welfare! Those who put the blame on Indian spirituality for the backwardness of our country do not know its force and its history. If soon in the future a technological and a mechanistic age is to take shape, it should be humanised, even moulded by the Indian cultural vision. The technological civilisation in this country cannot be therefore merely technological. It will have to pass through stages and processes different from those which the mechanistic

<sup>•</sup> From "The Waste Land", by T. S. Ellot

West and even Japan, passed through. The planning of India should be thus on different lines altogether—in the direction which the Renascent spirit chalks out for us. Planning is itself an engineering concept, and has risen from the resurgence of the scientific experience of the race by the pressure of mechanistic influences of the West. But in planning we have to take both the forces of the racial consciousness, the scientific and the spiritual, and achieve a balance between the two—a balance which may in time to come be a pointer to the future of even world-civilisation

11

### THE MAKING OF THE BOOK

"There is a turn in the Khyber Pass, as it winds from Ah Musjid to Jamrud, where all at once you see the mountain wall drop away to its foundation, and look out over a tawny plain, stretching illimitably into a far-off purple haze. No spot on earth is more saturated with the romance of history. For that plain is INDIA; and from here or hereabouts has it been surveyed by the swarms of on-coming Aryans, by Alexander and his Greeks, by Scythlan, Tarter and Afghan hordes, by Timur, by Babar, by Nadhrishah and other conquerors without number. . . Is there any other region in the world which makes such a multiform appeal to the vision, the imagination and the intellect?"

These are the words of a critic brooding on India and its challenging appeal to our minds. "15 Years Ahead" has been prepared in response to this appeal and challenge by those who know our country well and who have the authority and responsibility of grappling with its many problems. But it is not made only to express this response. It is written with a deeper motive of bestirring ourselves about such weakness of the country as has left it open to "conquerors without number". The testament of our great statesmen and soldiers, thinkers and seers of today reveal an unequivocal faith that in the years to come it will become unconquerable. But that faith can be implemented solely by constructive thinking and practical measures that will lift us out of this abject weakness. There is no golden road to so difficult an achievement. As one surveys these pages one finds this truth abundantly clear. There are many long rough roads the Indian mad must tread -- of painstaking analysis of principles and facts, invoking the vision to explore in new directors. fashioning bold and effective methods of carrying out the ideals set forth. In a small measure we have in this book made a beginning in this long spade-work -a mission which is as much quickening as arduous to the Indian mind and will.

When we think of India's future after victory, we have naturally to consider her growing tendencies and movements of today. We weigh her progressing purposes and ideals, and peer into their distant fullment. To that extent, from the dynamics of the present we can judge what is to come. It is not this judgment alone that matters. What is of Importance is the way in which we can adequately come to terms

with the impending future. With that objective "15 Years Ahead" has been written on the basis of a long-range perspective of events and a broad grasp of fundamental principles. It is not primarily a book of immediate measures, of adjustments, of the post-war momentary changes and circumstances. though some of these even are suggested. It serves a somewhat different and a larger purpose-of discussing ways and means of developing the nation's resources as a whole. In doing so, it has two important reasons in view. Conditions, special to India and at variance with those in other countries, demand Indubitably this large aim in planning. And under such a necessity, even projects of immediate measures cannot be whole-heartedly and successfully carried out without setting up a long-range target before the country.

To explain these reasons it is necessary to make clear the distinction between planning and reconstruction. Reconstruction must invoive planning, but its aim, as the very term signifies, is to rebuild what has been destroyed and so it has meaning only in a special narrow context. Planning is something much wider than reconstruction. The difference between them is not merely one of length of time but that of content, a difference in the whole point of view. To bring out the necessity of the deep vision in Indian planning, we may compare the conditions in England and India at the moment. England is considerably ravaged by war both in men and material, and the first task will be of restoring the physical well-being of the nation, the rebuilding of war-destroyed areas and the rehabilitation of men. In India, on the other hand, there will be not so much work of physical reconstruction, for although we shall have to attend to the rehabilitation of our wounded, India cannot be said to be war-ravaged. We will not be required to do reconstruction in the sense in which England will. Further, England is industrialised to a very large extent and she has already a fair standard of living. There are all the facilities and opportunities which industrialisation brings, and there is no such poverty as we find in our country. She has a background of fulfilment of industrial objectives which India has yet to envisage. Such a fruitful planned development can be the foundation of a reconstruction of a short term. Unlike England and even other countries, India has no foundation of this character. To hold mere reconstruction as the all-important task would be for us a short-sighted venture. Not only would It be short-sighted but it would be giaringly inadequate, in the absence of an established balanced and progressive economy. Mere post-war reconstruction would, so to say, hang in the air without a rational support for It.

Even as to the question of the immediate future of the home-returned soldier, no planner could deal adequately with it as altogether an independent issue. Urgent surely it is, but it can find a proper place and answer only if we prepare a wider scheme of developing the whole Indian economy. Once again the soldier finds himself in a network of social and economic relations, and nothing except the better-

ment of this network can effectively improve his future. Will he not look forward to a broader transformation of the Indian scene? In a war where life becomes cheap, the value of the sacrifice lies in the great objective he places before his mind. He does not want merely peace and rest for himself. He cannot be satisfied with measures of temporary planning. For a while they would encourage better living, but he knows that soon the deep-rooted poverty all round him would affect and swamp the high interests for which he has made his sacrifices. He expects to return to a world without misery staring through the eyes of his people—a new and enlightened system of things which only a long-range planning can produce in India.

"15 Years Ahead" sets before itself the necessary wide vision and outlook in pianning. It has made this clear in its method of presentation and its range of topics. With a grasp of essentials, it provides the planner with proper instruments to deal adequately with burning questions of the moment. The vision which the book has is as much practical as it is wide. By limiting the planning period to 15 years, it has compelled the mind to think in practical terms. It covers such a span of time as would be sufficient for framing broad objectives and setting about the task of carrying them out. Besides, the mind is made to have a realistic approach to problems. The writers express it in their thoughtful and elaborate survey of all that they discuss. Many of the statements do not reveal any sentiment, they are heavy with thinking and statistics. But they have a value all their own. For there is a ciarification of principles and a cold calculation of facts without which the spirit of planning cannot forge ahead. Often enough, the scientific analysis is touched with patriotic fervour and a creative play of the imagination.

But there is another side of the practical nature of the book which requires expianation. We usually regard as practical that which is easy and simple. We can use this meaning in the case of simple things. Pianning for future India is too complex and too enormous to admit of simple analysis. As dealing with such a subject, the book cannot have that practicality which we expect from a treatment of ordinary themes. On the other hand, it is essentially practicai inasmuch as it uses a method true and adequate to its subject, - the method of scientific analysis, far-reaching in its influence and its application. In engineering, planning can be expressed in a clearcut outline. But when we turn to the development of life and progress of humanity, we soon realise that their very nature and their complexity preclude such geometriai formulation. Pianning, in the deeper sense of being applicable to living issues, acquires a difficult meaning. In "15 Years Ahead" we cannot, therefore, find easily discernible outlines of planning. It can consist in no more than an attempt to estimate the motives of certain forces, calculate them when one can and present valuable judgments about the shape of things to come. This difficulty of treatment has to be realised by every

planner, however earnest he may be, as it was accepted centuries ago even by the best Greek mind in the first memorable thesis on planning, "The Republic." In accordance with the difficult task, we shall discover a different and a profounder practicality than ordinarily asked for. It lies in showing, through critical analysis, general directives for a new India that is yet in the making.

The magnitude of the task which the ancient pianner set before himself was not dissimilar to that of "15 Years Ahead." Plato wrote his book, with eyesores in his eyes, looking at the evils of Greece on the one hand and on the other taking a grip on the new resurgent elements, full of promise. "15 Years Ahead" also shares this double outlook. It recognises the weakness of the country. At the same time Its vision emerges out of the living background of Indian Renaissance and the manysided unfoldment of its activity, first troubled and haiting, now a bold stream pushing ahead in every direction. It includes within itself such fleids of inquiry as social welfare, education and cuiture, which are usually left for the literary thinker and the reformer rather than the planner! Great comprehensiveness is necessary, because the goal is not planning itself, but life, the complete well-being of the nation. We shall destroy this concept if we accentuate one or the other part at the cost of the varied richness of the whoie. For the neglect of it is bound to bring its own consequences and ruin the individual aspect emphasised unduly in a mood of prejudice. It is thus that the Constitution of the United States of America has put before itself three fundamental objectives: "Life, Liberty and the Pursuit of Happiness." "15 Years Ahead" has these in view aiming at the harnessing of all conditions and powers in the country that make for the greater development of life. In its comprehensiveness it is unique, providing the correct goal for constructive thinking on India's future.

But its comprehensiveness does not blind it to the realisation of the importance of economic issues so urgently pressing on India. On the contrary it was out of the brooding on the poverty of our people that the Idea of the book first arose, Poverty is relative to economic circumstances in each country, and understood as such we cannot heip speaking of "Indian poverty". It means life below even the bare subsistence level, something which is galling to the mind and heart. No patriot can fall to brood over it. When he turns to grapple with the problem, he will be staggered by its immensity. He has to deal with a phenomenon centuries old, affecting a block of humanity as large as a sub-continent. Long before the British rule it was present, and throughout that rule it has persisted. As we find it today, it is the direct result of an abnormal congeries of circumstances. As a critic puts it, 'Disraeli once said that there are two nations in Britain; in India there are two eras!" There are modern towns, civilised to a high degree, but side by side with them, there are vast spaces of uncultivated land and large masses of people in a primitive state. Poverty is rooted in this

abnormal and unbalanced economic and social structure with its contrasts of two ages across the length and breadth of the country. So deeply rooted is it that the Indian mind is apt to regard it as a part of an inexorable fatality. It takes poverty for granted as if it were a natural defect in limb or body, ordained by destiny.

"15 Years Ahead" is an earnest of the new spirit in which to view the problem of our poverty, the spirit of a realistic approach to its complex nature. While rejecting the fatalistic standpoint, the book recognises the real intricacy of the problem and refuses to see it as wholly an economic issue. We must face the fact that what is meant by the term "poverty" in India is not purely an economic condition, but a composite low level of life. It is due as much to the ignorance and degradation of the mass mind as to the maintenance of unjust economic relations. It is true that we require a closer study of economic relations and measures of adjusting them But we do not require merely such an effort. It is necessary to attend as much to the social welfare, education and culture of the people as to the economy of things For it is only by educating the common man and making him fully conscious of his rights that we can lift him out of the depressing whirl of blind unbalanced forces. The Indian planner must realise that there is no sole economic cure for poverty "15 Years Ahead" is instinct with this realisation. Aithough it does not splash it across its pages, its comprehensiveness and its realistic approach boldly argue for it. True, here is no fighting formula. Yet here is a fighting thesis - the evolution of a true method, the instrument of comprehensive planning, which alone can attack the menace of "Indian poverty" and remove the economic inertia and its devastating consequences

Such a complete effective planning can be brought about only by a full-fiedged national government. The Indian political situation, however, is at present complex in the extreme Although there may be a provisional solution of the existing deadlock, it may take quite a length of time for a proper elucidation of its several issues. National government is a phrase which must have a content, but to give it a thoroughly satisfactory content is an exceedingly complicated task. For the whole problem is studded with difficulties - questions of the form of government, the division of powers of administration, the separate economy and rule of two major communities, and the rights and libertles of the different strong minorities. The nation is charged with the desire for freedom, but political motives are hindered by blind party loyalties in conflict with one another. We cannot address ourselves to the political situation with its innumerable complexities. For, the very complexity of present political questions, if they are to be considered in their fuli importance, demand an elaborate independent treatment; if dealt with in our publication, they are bound to confuse planning issues and do a service neither to planning nor to politics.

The book does not deal directly with the present political cross-currents. Its aim is to put "planning on the man." But while doing so, it attempts to forge an instrument of powerful Indian opinion on rebuilding of the country's economic and social life and indirectly pave the way for a solution of its political ills. Britain has been feverishly planning to stabilise her shaken economy. Experts are busy, formulating ways and means of saving Britain from a post-war slump, and of providing the British people with a lease of luxurious life which would efface their bitter memories of death and disaster. Well may a nation deserve a reinvogorating peace and reconstruction after severe war-trials and sacrifices such as Britain underwent in the heroic defence of her island. But so long as she keeps India in tutelage and will not forego imperialistic claims, history may repeat Itself. As in the pre-war times, so also in the post-war period the changes in her economy may affect India adversely to a considerable degree, The rapid plans developed in Britain may be so utilised that Rules, Regulations and Conventions set up by Imperialists in India may leave India helpiess. Further, as we have aiready pointed out, the political situation is so complex that it will not be amenable to an easy solution. If, therefore, Britain associates India with the work of developing the postwar economy, there is a growing suspicion that it is to make India the subject of further exploitation. As a critic of the Government bluntly put it, "we shail be more planned against than planning!"

It is true that the War as a ruthless changer of peoples is something to be reckoned with even by diehard opinions and motives. Within Britain herself. it has broken down conservatism which could not be touched for centuries, and such momentous changes have taken place with the full co-operation of the people as to leave an old-time Britisher breathless. There is thus every reason to believe that these very changes will influence the British outlook and opinion and British relations with India, Besides, India's great contribution to the war both in fighting manpower and resources has been acknowledged on all hands. This is bound to add to the changing outlook of Britain towards India. But, on the other hand, as long as certain jingo politicians are in power, they may not let Britain give up her Imperialistic claims We cannot, therefore, entirely rest content with lettlog the Government do all the planning. We should be prepared with our own expert opinion so that we may be able to judge what is done by the Government and what is being left to be developed by the nation. In this book we have asked experts to give us their say independent of the Government and set the pace for such preparation.

We have exercised in this volume a policy of being free from any political bias or prejudice vis-a-vis any special plan. Considering Mr. Gandhi to be the most outstanding man in public life in the India of today, we have given a separate place to his principles of planning, but only as one point of view among others. This will be evident to any one, for

side by side with and to an extent counterbalancing it, we have other able and independent contributions on the fundamental principles and objectives. Freedom from the bias of any particular plan was both necessary and of great practical importance. When we survey the several different plans, we find that they are fraught with difficulties and faults, and that these arise chiefly out of the extreme ideology of the party which they espouse or of one-sided interests of a group which they defend. In order to utilise the good that is in them, it is necessary to reject from our minds the bias of parts or group from which they suffer. In addition to achleving this freedom, we have on purpose not adopted or evolved any one single scheme. We make an open and frank acceptance of the fact that considering our stage of national development, weighing the situation as it is, both political and economic, and the magnitude of the task for planners in proportion to the vastness of such a sub-continent as India, it is not likely that any single rounded plan can be adopted wholly by the country at present.

"15 Years Ahead" is thus a testament of complete freedom of opinion. In planning there are grave dangers to the ethical rights of humanity, for although it may increase the wealth in the country and may even for a time improve the lot of the poor, it may do so at the immense cost of their freedom. These dangers arise when the planner does not place before himself true objectives. We saw this in the narrow and rigid planning of Germany and the militarisation of her people for the purpose of carrying it out. We witnessed the regimentation of the mind to think only in terms of the "Master-Race" and "Race-Superlority", so much so that the individual could not think for himself. If he wanted to differ, he was forced to subjection at the point of the bayonet. A ruthless re-organisation of education to uphold a narrow idea at any cost, even at the price of mental liberty, and a "blood and iron" militarisation so as to enforce the idea,-it is such planning which "15 Years Ahead" by its emphasis on freedom of opinion warns against. Man is free to think, whereever he is. And it should be the first principle of the planner to endow him with this right so that he may foster and build a bold and open-eyed society on its foundation. The opportunity to think freely carries with it the spirit of co-operation among peoples. In not supporting one school of thought or another, "15 Years Ahead" initiates also a movement of open thinking which may in the end clear the way for a reconciliation between opposing views. It records a silent revolt against isolationism of the mind, - an isolationism which fails to recognise the effects of present-day changes. For the rapid progress in science has annihilated "the sense of space" which men held in awe and by which they were divided. There is an undreamt-of quick communication of ideas between one nation and another. Planning under subjection to a one-sided point of view, shut off from world-trends, is bound to create an artificial tension and ultimately must break down. It is therefore but necessary that the Indian planner, while devoting himself to constructive work for his people, must be in contact with the aspirations of other countries and develop an international outlook. All humanity has a common basic goal, - the ideal of freedom and the claim to happiness. And the task of building the future is a common task among men, wherever they are, even separated by vast distances. Through the mutual balance of different views, the coming together of men of different shades of opinion and of different communitles, "15 Years Ahead" sets up the ideal of co-

operative thinking, irrespective of caste or creed, To submit a pian according to a single narrow one-sided ideology is not a difficult task, For the mind does not open a forum for discussion of the issues as they are, without fear or favour. A partisan clear-cut planning may elicit for a time our admiration. But the jumble of issues it brings forth and the disaster it creates in the world will soon convince us of the extreme poverty of thinking behind it. This is brought home to us if we realise that Planning is a great adventure in new ways of thinking and life. It has all the unforeseen dangers of an adventure, and it needs all our mental powers and wits to envisage the several intricate problems of it and clarify our minds about them. Besides thinking, it is also a new type of living, the transformation and marshalling of individual interests to give rise to a collective mode of life, disciplined and trained to perform collective duties. Knowing planning in this true light, we must organise all our thinking in order to act accurately and justly. It is the impatient action without a vigorous attempt at thinking which has made man so often a failure and made the history of his actions so much a farce and a crude staging of his half-baked ideas. "There is no dignity yet in human history," as H. G. Welis sums up, "it would be pure comedy if it were not so often tragic, so frequently dismal. And it is so largely tragic because the creature really is intelligent, can feel finely and acutely, express itself polgnantly in art, music and literature, and impotently knows better!" Pre-eminently, what we need is clear thinking before any great decisions for action. Planning is a major decision to be carried out in this country. While we carry it out and plunge into the course of events whose logic itself is a force to be reckoned with, we must have a regular assembly of knowledge and 'nformation. This book provides this assembly; at more quick and living and yet august, with a firm and accurate grip on facts and all the talent and vision which the Indian mind can bring to it.

H. D. Sethna

# NOTE ON EDITORIAL WORK

⊣HE year 1944 will go into the annals of Indian political and economic thinking as the year replete with "plans". By way of criticism or by way of parallel effort various individuals and bodies issued plans after plans to counteract, defy, supplement or support the Bombay Industrialists' plan offered to the public early in the year 1944. The middle of 1944 thus had shown almost a frenzy for plans amongst the thinking public of India. It was also easily discernible then that the people in general were anxiously and zealously looking to planning as a panacea for a great many social and econome ailments of the country. The work of the National Planning Committee was unfortunately left incomplete about the middle of 1942. It was revived after the Russians' success on the military front. Their eventual victory in putting down the aggressive forces over the continent of Europe had aroused tremendous admiration not only for the Russlan bravery but also for the great economic and social background which their plans, one after another, during the last about 20 years had created for their economic and military achievements. Soviet economy had become, therefore, a model for the backward and geographically similar countries to follow. Even in Great Britain. as early as 1941, the Government and the people had taken a start with planning. Various panels were formed to set up planning of different aspects of national life. In India, the Government was merely gauging public opinion on the questions of post-war reconstruction. It was in response to the need for constructive work in the realm of planning that some industry and business magnates, economists, social and public leaders had undertaken to offer their respective views. However, owing to various restrictions on printing or other channels of expression there obviously remained inarticulate a great many people who had devoted their best attention to special problems of national planning. It was, therefore, a necessity that some collective effort be made to bring together their studled and thought-inspiring opinions and judgments. It was at this juncture that a scheme for a volume titled "15 Years Ahead" was projected to gather expert and authoritative opinion on different aspects of national planning.

At the initial stage, Mr. Sethna, the Executive Editor, in co-operation with Principal D. G. Karve, of B. M. College of Commerce, Poona, chalked out the scheme of the volume and prepared a tentative outline" showing seven different sections of our national life and embodying the various essential topics that could be touched under each section. Later, by public announcement and by regular correspondence

conducted for several weeks from November 1944, we were able to contact several people, far and near, and convey to them the scheme of our volume. Also in view of the diverse sections, it was our desire to seek the most authoritative and expert help in the organization of each section. Both for organization and for the contributions, fees were duly paid, as announced in the scheme. Of the seven, the last three sections, as the readers will find, have been organized under expert help. We need not say that we are extremely thankful to all these Organizing Editors. However, in spite of our extensive and widespread effort we were not able to get Organizing Editors for the first four sections. Yet, with the valuable counsel and advice that we had fortunately obtained from several personalities we have organized the sections concerned and we hope that the work of organization has in no way suffered.

We are glad to mention that the response to our appeal for contributions on different topics and under different sections was extremely good and we received a fairly large number of contributions from centres near and distant and from persons long known for their scholastic merits, their extensive studies, their thinking and writing on questions of national importance. It was then our task to slft and choose contributions which would closely conform to the scheme of the volume aiready announced. While It was our desire to arrange accommodation for as many of the best contributions as were received by us, it was partly under the painful necessity of restrictions on printing and space and partly because of principles requiring the contributions to be in tune with the perspective of planning under a scheduled scheme, that we were required to return some of them. All the same we may mention here that we have very greatly appreciated the help that was accorded to us by different persons even though their respective contributions could not be given place in the volume.

The next task was to take up the sizing of the contributions which were found suitable under our scheme. True though it might be that the contributions were from authoritative pens, we were yet required, in some cases, to size and arrange the reading material, either by reduction or by rearrangement, both to suit the printing conveniences and to go in conformity with the general scheme of the volume. We need not say we are exceedingly grateful to all the contributors who have given us their valued co-operation in supporting the literary side of this work. We also owe our applogies to some for a little restlessness that they may have felt owing to the

delay that has come about in taking the volume through the press. But, considering the great odds against which the publication of a volume of the present size had to be conducted and considering our zealous desire and constant endeavour to give it the best presentation possible, whether in reading material, choice of topics, treatment or in external - and for his valuable suggestions appearance, we hope the contributors and the reading public will condone our delay in publication. We also assure them that the freshness of the contents remains as before because, in the first place, the political, social and economic conditions in this country have shown almost negligible changes since the closing of military hostilities and, in the second place, because the contributions claim perennial value owing to their inherent and all-comprehensive grasp and treatment of the fundamental and essential facts.

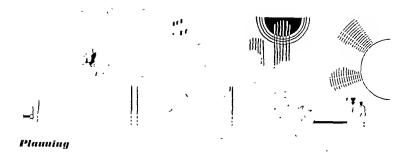
We cannot complete this note unless we express our sense of gratitude to those industrial and business houses who have co-operated with us in the insertion of advertisements. It has been due to their support, to some extent at least, that we were able to prepare this volume with the present sige and get-up and with over 300 pages. Their co-operation has also marked, in spirit and action, a harmonious combination of business and planning.

We are thankful to Principal D. G. Karve, of B M. College, Poons for his co-operation in preparing the "outline" for the book and to Prof. P. V. Patwardhan, Wadia Coilege, Poona, for his keen interest in the scheme in the early days. We are also thankful to Mr. K. D. Sethna for closely scrutinizing the material

We thank the Bombay Advertising Agency, Ltd., and its Manager, Mr. Largo Afonso, for general assistance in arranging the get-up of the volume and to Mr. T. N. Lakshman Rao of the same Agency for the effective art panels of different sections. Our thanks are also due to Mr. M. Desai, Dr. B. F. Ferreira and Messrs. Volkart Bros. for the appropriate and suggestive photographs they gave us and also to Mr. John Paulose, B.Sc., for preparing the charts. We also appreciate the help given to us by Mr. R. S. Kapadia. C.A.I.I.B. the Advertisement Manager, and Mr. A. H. Trivedi, A. T. I. L., the chief Assistant of our office.

Lastly, we owe very sincere thanks to the New Era Printing Press, Mr. D. D. Kanga, Mr. P. D. Kanga and Mr. S. B. Phansikar in particular, as their co-operation has greatly helped the success of this volume.

G. M. Marathe



## OBJECTIVES OF PLANNING

I. K. MEHTA

Prof. J. K. Mehta, M. A., Reader in Economics, University of Allahabad, is an eminent writer on sarious topus relating to Economics, Emance and Politics. He has to his credit considerable research work in pure and applied Economics, and is a very renowned student and critic of problems of Indian Economics Clearest thinking and scenific exposition are the distinguishing features of his writings.

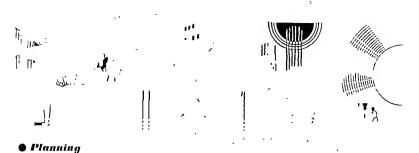
Prof J. K. Mehia has pointed out in a most comprehensive and lucid manner the meaning and necessity of general economic planning and has correctly presembed such planning as the only possible remedy for the glaring deficiencies in the present social and economic order. Rationalised production—what it traitly means and how it can efficiently work—is the keynate of his exposition. This alone can prove useful to an undeveloped country like India The serveral Plans for India, sponsored by Government, by industrialist and by other schools of thought, will have to take into ecount the full implications and the practical force of the indubitable cardinal principles ostillated in this article.

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Are, however, our achievements, the result of toll and sweat, really so useless? No. Usefulness consists in the use we make of things and not la the things themselves. Man has a creative genius and he can

produce wealth in abundance, but the usefulness or otherwise of all this wealth, be it material in the form of commodities or immaterial in the form of knowledge, depends on the manner in which it chooses to utilise it. Use does not follow production as automatically as night follows day. We cannot use what we do not need; we cannot have what we cannot buy. In order that the products of our labour may serve some useful purpose our creative genius has to be wisely controlled and productive efforts efficiently directed. Production, in a word, has to be planned.

Unplanned production expresses itself in the output of things that add little to real welfare and in the
performances of services that do not conform to any
pattern of well organised life. In simple language the
root of the trouble lies in the fact that the productive
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same ultimate object. In a world in which people could
live as individuals having no corcern with their fellow
men the pursuit of his own end by each man in his

own way would have created no trouble. But where people's needs are dove-tailed and their efforts interdependent, as they are in the real world, the direction of his efforts by each to a common purpose becomes an imperative necessity. Absence of any conditions planning on the part of people engaged in production thus becomes the major cause of poverty in the world of pienty.

### NO PLANNING WITHOUT AN OBJECTIVE

But what precisely do we understand by planning and in what manner are we to organise our efforts so as to secure the benefits we expect from it? It is easy to misunderstand this word; for its too common use in the press and on the platform has given it a vague connotation. Pianning means and can only mean the process of making a conscious preparation for the attainment of a pre-conceived object. The object is the end-the final result-and planning is the preparation for its attainment. There can be no planning without an end; for planning is always for an end. In an unplanned economy the final end is not conceived by any and, therefore, there is no organised effort towards the attainment of a common objective Each producer for each unit of a productive plant) plans for his own individual end so that the entire economic structure is raised on a multitude of plans the aims of which clash with one another. Thus not only is the final social end, whatever that may be, never attained but even the ends of the individuals themselves are never successfully realised.

Planning then, as we have said, is a preparation for an end. Whatever the end may be, good or bad, easy or difficult, remote or immediate, desirable or undesirable, we can conceive of a plan so long as a concerted effort can be made for its realisation. Likewise, planning does not necessarily pre-suppose any particular form or type of government. Preparation for an end can be made by any agency; and any form of government whether national or foreign, democratic or autocratic, fascist or socialist, can act as such an agency. This does not however mean that every agency would be equally successful or efficient. Where the end is already determined it is of course best to entrust the work of planning to an agency that is at once efficient and honest. Given these essentials of successful planning, viz., efficiency of work and honesty of purpose, planning can with safety be entrusted to and therefore be undertaken by any type of government. It is, however, natural for us to place the greatest reliance on a National government for the judicious preparation and successful execution of a plan.

We have observed that a plan may have any end. It does not, however, follow that all plans are equally good regardless of the end they seek to pursue. It is natural for the authority that selects the end to feel that the success or failure of a plan depends ultimately on the care and wisdom with which such selection is made. The objectives of a plan have, therefore, to be determined with the ultimate ends, particultarly for those who are accustomed to think in terms of such those who are accustomed to think in terms of such

material objects as money or wealth. What is it that we really and ultimately want? What is it that is needed as a means and what is it that is desired for its own sake? What are the real values of life? What is an ideal as distinguished from the practicable? It is questions such as these that we have to answer before we can determine the end of our policy.

### WEALTH, ITS CONCEPTION AND ITS RELATION TO PLANNING

One thing that we need to remember more than any other is that richness of life does not consist in wealth aione. And though wealth may be, at any rate in the present circumstances, the greatest single factor on which human happiness may be said to depend, it is still only a means to an end. Besides weaith there are a number of most valuable things which money does not normally buy but which nevertheless make a great contribution to the happiness of mankind. In any plan that we may adopt we have, therefore, to assign considerable importance to those ethical, moral and psychological values which do not in the normal course of our life express themselves in terms of money. Wealth has thus to be pursued with caution lest in our blind chase of it we sacrifice the other good things of life. And yet these other good things are precisely those that do not lend themselves to mathematical treatment. While we can subject the production of wealth to mathematical calculations and thus make them form the concrete subject matter of our scheme, we cannot do more than merely assign to moral values a place of great importance.

A plan, then, as we understand it, has of necessity to confine itself principally to the production and consumption of wealth and services. The objectives of a plan are thus correspondingly limited. We may at once mention them here as consisting in making available to each man a supply of as much of wealth and services as is compatible with the attainment and maintenance of physical, intellectual and moral health. Wealth beyond a certain limit causes degeneration not only of moral health but also of physical fitness. It becomes, therefore, increasingly difficult to devise ways and means of counteracting the evil influences of growing richness on the immaterial side of our existence. Happily, however, for our country the stage at which degeneration may be expected to set in 1s far removed. Yet it should not be inferred that we need to concentrate our attention exclusively on the things that money can produce and the things that money can buy. Such desirable things, for instance, as leisure, open space, sunlight, ireedom of action and freedom of expression are not bought with money, but are nevertheless of supreme importance for us and we cannot ignore them simply because we have decided to lay emphasis, in the initial stages, on wealth aione.

As we have aiready said, the object of our plan should be to enable each man to consume as much wealth and services as possible. But as the production of wealth encroaches on leisure and as the consumption of the same beyond a certain limit produces the other undesirable effects that we have just mentioned, we shall have to regulate and control with great care the output of various forms of goods and services.

# RATIONALISED PRODUCTION: ITS CENTRAL PLACE IN PLANNING AND ITS DIRECT BEAR-ING ON CONSUMPTION

If consumption is, then, the end of our plan, production and distribution are the means to that end. Hence a plan has to concern itself with the production of goods and services and their distribution among the people. Of these two means, production and distribution, the former ought in the nature of things to be at once more difficult and more important. It should be more difficult to make the cake than to cut it into slices. Unfortunately, however, distribution has become the more difficult of the two in our modern economy. And that, as all students of economics know, is due to the fact that distribution is effected through money and the right to it acquired by work. But is it not only just, you may ask, that only those who work should have the right to money or to what is produced? Well, the fact is that whether this is just or not depends on whether every one has an opportunity to work and thereby earn his right, and also on whether his money income is able to buy for him what is his right. In simple words, distribution is difficult today because some people are not able to find employment and those who do find it are not able to earn incomes that would entitle them to their due and rightful share in production. These two defects or difficulties are, however, not quite Independent. Unemployment and unjust distribution of wealth are both due to the fact that we do not produce just the right quantity of each commodity. We overproduce some and under-produce others. That causes unemployment among the people who produce the former and enable those engaged in the production of the latter to earn more money and thereby appropriate a larger slice of the national dividend than what is their rightful due.

The problem of distribution has, therefore, to be solved at least partly by planning for a proper apportionment of resources between the various productive enterprises. This is of course a question of relative production as distinguished from absolute production. The latter is purely a question of production. When the national resources are properly distributed between the various enterprises there is no possibility of over-production in any industry, and consequently of under-production, causing maldistribution of wealth and an incomplete use of what is produced. The solution of the problem of distribution of national resources will require the determination of the relative amount of each commodity to be produced. But since these relative amounts dictated by the needs of fair distribution may not tally with what are dictated by the needs of rational consumption certain devices have to be adopted to ensure that improper distribution of national resources between the various industries does not cause a maldistribution of wealth. Thus, if more cloth is produced (because needs of consumption demand it) than what

can readily and profitably be sold i.e., greater than the proper relative amount, it would become necessary to subsidise the cloth industry in any one of the several ways known to economists.

Such a divergence would be met with in the case of those commodities which people of their own free choice would consume in relatively greater or less quantities than what the planning authority considered proper. While it would thus be necessary to subsidise the production of some commodities, it would for like reasons become necessary to impose restrictions on the profits and earnings of those other industries which, owing to the relative scarcity of their products, would otherwise be able to acquire an unduly larger share of the national dividend. This can be done most easily by the fixation of prices.

If it were possible to determine and fix the quantities of all the commodities and services that we would like the community to produce, the problem of distribution would become a relatively easy one. But it is not possible and probably not always very desirable to fix rigidly the output of each and every thing. In the case, then, of such uncontrolled goods it would be necessary to examine from time to time their relative outputs to see if they were not cumulatively increasing or decreasing beyond proper limits.

While the proper distribution of resources in general between the production of various goods and services would enable us to turn out regulated amounts of these purchasable things and thus ensure a proper distribution of the national dividend between different categories of people, it would not in itself be sufficient to guarantee to all a fair or decent standard of fiving. Thus, for instance, while the cloth industry may be as prosperous as the leather industry because of a proper adjustment of their outputs, the labourers in the former may not be able to earn as much as those working in the latter. In other words, while the distribution as between industries may be fair, that between the various factors engaged in any industry may not be so. Immobility of labourers, their ignorance and low bargaining power are often the causes of such a maldistribution of wealth. It would therefore be necessary further to incorporate in the plan such measures as those dealing with minimum wages and the limitation of dividends.

Of the two types of distribution of national dividend— the one between industries and the other between the various factors engaged in any productive enterprise—the former shall need our attention first. Though there is a great disparity of incomes between the labourers and the capitalists and, consequently, the standard of living of the labour class is deplorably low, the conditions in agriculture as compared with those in manufacture are certainly far worse. It will therefore, be necessary for us to readjust purchasing power and bring about a better distribution of national dividend as between agriculture and manufacture.

At present the income of the agriculturists is too low to enable them to buy a sufficient quantity of manufactured goods. We cannot improve matters

very much by mercly making agriculture more productive, however necessary that may be to enable them to produce and retain for their consumption a larger quantity of food. So long as we do not change the distribution of resources between agriculture and manufacture we cannot enable the farmers to acquire sufficient purchasing power for the purchase of manufactured goods. In order that the farmers may have a decent standard of living what is required is that the income they obtain from the sale of their produce should be large enough to enable them to buy manufactured articles in sufficient quantities. For it is necessary to see that the prices of agricultural produce be high in relation to those of manufactured goods. But that ean happen only when the surplus output of these goods is comparatively greater than the surplus output of agricultural produce. And that again necessitates a highly mechanised and effielent system of production in manufacturing industries. To increase the surplus further we should employ a larger number of people in these industries. This would also have the effect of reducing the surplus output of agricultural produce as fewer people would then be available for work on land. An efficient system of production both in agriculture and manufacture and a larger proportion of men engaged in the latter would have the effect of enabling the farmers to raise their standard of living.

### NECESSITY OF URBANISATION

The transfer of our population from villages to towns should therefore be an integral part of our plan. Suitable measures would have to be devised to promote and encourage the movement of population from the rural to the urban areas. The mere incentive of higher earnings in towns that would be brought about by industrialisation eannot, in a country like ours, be relied upon to effect the necessary exodus of population from villages to towns. Some sort of propaganda in the villages and the offer of very attractive terms to those working in manufacturing industries in the towns, at least in the initial stages, would greatly assist the execution of our plan.

All the measures so far mentioned for bringing about an equitable distribution of wealth so that production may not be wasted or handicapped refer to a capitailstic system only. In a socialistic form of government, however, such measure would not be needed. There, the State being the ultimate and sole owner of all enterprises, the method of making payments would be entirely different and the incomes of people would have no rigid relation to their productive work. Production would not be hampered nor its final utilisation by the people made difficult by the scarcity of purchasing power. The problem of distribution, as we understand it to-day, would in fact hardly exist and the main difficulty would consist-as, we have observed, it should-in producing goods and services and not in their utilisation by the people of the country.

We have however proceeded on the assumption that the capitalistic system could continue — at least for a period of time — and that it would be the duty

of the planning authority not to abolish it altogether but to devise ways of controlling it in such a way as to enable it to solve the problem of distribution of wealth and guarantee to the teeming millions of our population n decent standard of living — in fact as high a standard as human sagacity, wisdom and toil can secure for the sons of richly gifted country.

We have, therefore, suggested the various ways which, if adopted, would bring about an equitable distribution of whatever wealth the natural and human resources would be able to produce in a planned economy. We took up this part of the plan first because, as we have seen, distribution is the more serious of the two problems with which the world is faced to-day. We do not however mean to imply thereby that the problem of production is independent of the problem of distribution, nor even that the one can wait till the other has first been soived. As a matter of fact the two are closely dependent on each other and though we may attach a greater importance to one we have to tackle both of them simultaneously. We shall, therefore, pass on now to the question of production which is one of the two means to the end -the consumption of as much wealth as is comnatible with a happy and healthy life.

While planning for production three fundamental facts have to be borne in mind. The first is that the planning authority or the country itself must first be ensured a peaceful existence. Without security of national life planning can accomplish little. We have first to plan to exist before we can plan to live in comfort. The second fact is that the production of certain goods and services has to be rigidly controlled in the interest of the health and happiness of people. In the third place, we have to remember that production has to be increased to the maximum possible extent. We shall take up these points one by one.

#### SECURITY FOR PLANNING: Defence Industries

In order that our country may be able to proceed with the work of planning in a cool and confident manner it is essential that adequate arrangements be made for the security of the nation's life and property. For that purpose it is necessary to arm ourselves so that in times of need we may be able to defend our honour and our life. We have, therefore, to plan for the production of all the modern weapons of warfor the building up of a strong and well equipped army, a navy and an air force. All the manufactories needed for this purpose shall require our first consideration. They shall either be State owned or State controlled or at any rate, they shall have to be protected by the State. No price is too high for the purchase of national safety and so these industries shall have to be developed at all costs. National self-sufficiency in the matter of production of these armaments has to be achieved without unnecessary delay.

It has to be clearly realised that in planning for such production we have no aggressive motives. Defence and not offence is our object. All the national resources engaged in the production of these weapons of destruction are not, in the broadest sense, usefully engaged. But so long as the possibility of foreign aggression is there, we cannot take such a broad view of the matter. Arming for self defence is a necessary evil. If the world were to come together and plan for its development there would be no necessity for any such thing. But a national authority that plans for its own development cannot possibly ignore the need for well-trained and a well-equipped army, navy and air force. We shall have to draw to these services and the armament industries, our man power and our natural resources without stint. The residue would thereafter become available for useful employment in other industries and services.

There are, however, services and commodities the use of which cannot be left to the free choice of the people. Their consumption in an indiscriminate manner produces a deleterious effect on the physical and moral health of the people. Much as we would desire to increase the production of wealth in general. the output and consumption of such services and commodities have to be controlled by the planning authority. The control would aim at restricting the output of some commodities and improving the quality of others. Though health would not be the only consideration as far as this aspect of planning is concorned, yet in the initial stages at any rate, attention would have to be focussed largely on those services and commodities the use of which undermines the health of the people. It certainly does not need wholesale planning for the State to be able to control and check the consumption of harmful things. In fact, such control is a part of the normal functions of the government in ail countries. However, it is only when planning is seriously undertaken that this part of the duty of a government assumes its proper proportion. It has, therefore, to be remembered that planning does not necessarily aim at increasing production; it aims also at the decrease of production.

# THE MEANING OF MAXIMISATION OF NATIONAL WEALTH AND ITS RELATION TO THE PROBLEM OF FULL EMPLOYMENT

Yet the main work of planning in the field of production consists naturally in devising ways and means of increasing the production of wealth. To what extent, then, and in what manner are we to increase it? We have already sald earlier that production has to be speeded up and increased to the maximum possible extent. For though happiness and wealth do not always go together, the time when they part ways is yet quite distant as far as our country is concerned. But the phrase maximum production of wealth has very little meaning. Production is a process spread over time and we cannot conceive of it without relating it to a period of time. Are we to maximise production in the ultimate end or within a specified period of time? And again, if the latter, can we realise this end, or should we attempt to realise it? Aii these questions must pose themselves to the planning authority that thinks and acts cautiously.

In normal cases the object should naturally be to maximise the production of wealth in the long period. For, it is only when long-run effects are sought that we can expect lasting results. Reckiess use or exploitation of resources in an attempt to speed up production within a short period is bound to militate against future results. Yet, it is not always possible to wait for a long time. Certain results have to be achieved within a specified period. It is partly for this reason that a plan is made out for a definite period of time. Moreover, it is not possible for us to think in terms of eternity; we have to think in terms of a small measurable period of time. There have, therefore, been five-year, seven-year and fifteenyear plans.

Given an approximate idea of the length of time within which we have to achieve certain results, what should precisely be the extent to which production of wealth must Increase? Should we attempt doubling of the wealth? If doubling, then would not trebling be better and a quadruple increase still better? This way of thinking brings out the fact that there is some element of arbitrariness in fixing upon doubling or trebling of national wealth as our target What are we, then, to do If such aiming at the muitiplication of the per capita income by an arithmetical number is judged to be an arbitrary process: The answer is not difficult. We should utilise all the resources at our command in the best possible manner. Of course, in judging what is best we shall have to bear in mind the fact that certain tangible results have to be achieved within a reasonably short period of time. Yet these tangible results need not be conceived of in an arbitrary manner. Let us make the best possible use of our resources within, say, fifteen years, bearing in mind the fact that we have to use our resources and not misuse or exploit them in a reckless manner.

The best possible use of resources means their most economical use — economical not in the sense in which this adjective is used by the man in the street, but economical in the true economic sense. Use the resources so as to get the most out of them. To get the most out of them (without exploiting them in a reckless manner) we have to assign to each unit of productive resources the work for which it is best suited.

This means also that no resources have to be kept due to the fact that many men are either unemployed or underemployed. And when they are thus unemployed some natural resources of necessity remain untillised or underutillised. In planned economy, therefore, full employment and economical employment are the first manifestations of rational and well-ordered co-operative life.

But how are we to bring about full employment? In an unplanned economy, as a student of economics knows, resources remain idle owing to a variety of causes. Some of these it would be difficult for the planning authority to remove. But the most important cause of unemployment—one that we have already noted—can be easily controlled. Today some people are unemployed because there is insufficient demand for the things that they can produce.

This insufficient demand is due to inadequate purchasing power and that is again due to the fact that those who demand those things have an insufficient amount to seli. The unemployment arises because we produce more than what is required of some commodities and less than what is needed of some other commodities. Planning guards against such disproportionate production and thus removes one of the most important causes of unemployment. The task of determining what are the proper amounts of various commodities to produce is not an easy one. And such a work cannot be entrusted to a single man or a single centralised body. The demand of the people for various commodities and services can be determined regionally and the work, therefore, has to be entrusted to regional sub-committees of the Central Economic Planning Authority. The demand for the various things would include not only the demand of private individuals but also of public bodies. It is difficult of course to determine the demand for any commodities without an idea of price. What would, therefore, have to be done is to base calculations on the figures of prevailing prices and then as costs fall, due to better and fuller use of productive resources, to make the necessary alterations in them.

#### THE MACHINERY OF PLANNING

It is to be clearly realised here that the work of ottermining the relative quantities of the things to be produced or, what amounts to the same thing, of determining the manner in which resources should be distributed between the various industries, is one that shall have to be entrusted to various bodies of experts. The work of these expert bodies has to be efficiently co-ordinated. For, how much of one commodity should be produced depends on how much of some other commodity is going to be produced. In short, attempt has to be made to avoid relative under-production or over-production.

While one part of the work would consist in finding the proportion in which the things should be produced, the other part would consist in apportioning resources between the different Industries producing them. Here some difficulty would be producing them. Here some difficulty would be procountered again. If we have to assign to each man the work that he is best fitted to do, it would be difficult to get sufficient number of people for some industries. It would, then, become necessary to do the next best liting and put some men to work in the industries for which they are next best fitted. By thus relaxing our principle of putting each productive unit to the best producing the service of the psychological demand of consumption and the technical demand of production.

We have said that it would be the duty of regional sub-committees to determine the demand for various commodities. It is necessary to note that such demand would not consist merely of the demand of private consumers; it would be made up also of the demand of all public bodies and, what is technically more important, the demand of various industries. Not only is it necessary to note this point because

industries, like consumers, need certain conditions but also because there are certain things which are needed only by industries. In calculating the demand we have, therefore, to think of the demand for things as consumption goods and as instruments of production.

As far as the demand for things used as instruments of production is concerned the most important part of the work would have to be done by the central co-ordinating authority. For, the production of capital goods is, in the long run, more important than that of consumption goods. Capital goods are reproductive in nature; they are comparatively speaking durable. A shortage in their supply would handicap production seriously, while a surplus output of them would throw the basic mechanism out of gear for a long time. Planulug would therefore have to be done with great care and cantlon as far as capital goods are concerned.

The consideration of this point takes us naturally to the question of self sufficiency in the production of machines and machine tools. Our country has so far depended on foreign supplies of most of the capital goods needed by our industries. This is a dangerous thing to do. It makes our entire economy dependent on the economy of other countries. It is comparatively harmiess, nay, even desirable to take advantage of territorial division of labour and import some finished products from foreign countries. But no country should be without the necessary means of producing essential goods of common use. Machine and machine tools constitute these necessary means. It is likewise necessary to be self-sufficient in the production of food. But as far as our country is concerned, that raises no problem.

We have said that to maximise production of wealth all available resources must be utilised in the best possible manner, that is, they should be put to uses for which they are best fitted. Further, it would be necessary, we have said, to maintain the right proportion between the production of various goods so that we may have not only maximum production but maximum useful and consumable production. But the mere use of all available resources cannot increase our productive capacity to any very great extent. For, aii that full employment would do is to increase our national dividend by say 25 to 30 per cent. It is necessary, therefore, to remember that we shall have to rely mostly on improvement in the technique and organisation of production for the solution of our problem of production.

Technique of production is mostly a question of the use of machinery. With the right type of machines, tools, implements, and improved varieties of raw materials it is possible to increase the output of most of the commodities several times. We shall need to import the right type of machinery (and later to manufacture them overselves) and work them in the proper way. To be able to use them properly we shall need trained organisers and trained labourers. In short we shall need better capital and

better organisation. It may here be asked: why, then, production has not actually increased in our country so far? There are several reasons for that. Firstly, we do not have trained labourers and trained organisers, and nobody has taken the trouble to train our own men, Secondly, we do not get adequate protection against the competition of foreign manufacturers. It is difficult and often impossible to build up an industry in the face of competition. Some sort of protection is needed while the industry is growing and reorganising itself. Thirdly, we do not often have the money that is needed to start an industry on a large scale. To take advantage of up-to-date technique, production has to be on a large scale. It requires a good deal of money to be invested In a new project; and unless there is a guarantee of success the risk is too great to enable capital to come out of its hoard. Fourthly, there are certain difficulties of a political nature in our way. The government at times does not allow our industrialists to manufacture certain goods. Then again, at times, manufacturers themselves are to blame. They do not take full advantage of technical knowledge and increase production to the fullest extent lest the price should fall very much and reduce their profits.

Planning has to solve all these problems before can expect it to achieve much. It is evident, therefore, that we shall have to depend a great deal on the help of the government to enable us to overcome these difficulties. Fortunately for us the government has already begun to help as far as the first difficulty is concerned, namely, the training of labourers and organisers. The next most important help that we shall need is an adequate measure of protection against foreign competition. And we shall expect the government to own those industries the technical improvements in which would greatly reduce the profits of private industrialists.

In order to bring about all these improvements in the technique of production it will be necessary to effect certain far-reaching changes in the art of agriculture. The system of land tenures will also have to be suitably modified. Irrigation facilities will have to be greatly increased and good roads constructed inking up villages with towns. In urban areas too road and railway construction will have to be speeded up. The supply of electric power to run our industries will also be needed in much greater bulk than is at present thought possible. And for that we shall have to exploit fully our water power resources, Hydro-electric schemes will need to be greatly expanded.

In the initial stages at any rate we shall have to depend to some extent on small industries. These, probably on the basis of cottage industries, will play an important part for some time. They will provide employment to surplus labour in villages. The raw materials available in rural areas would be economically used up by these cottage industries. The cost of production would not necessarily be higher than the cost of production of the large scale industries. Moreover, the products of these industries might serve as

raw materials for the other industries in the towns. Hence improvement of technique which we have mentioned as the chief means of increasing productivity would not merely consist in the turning of small factories into big factories; it would consist also in the integration of small scale industries with large scale industries.

Lastly, we come to the question of finance. The system in which we live is known as money economy. All the things produced and all the services performed are first sold for money before they are consumed by anybody. Thus, money is required to finance all productive enterprises. No plan can, therefore, work uniess there is money enough for all the undertakings planned. All developmental schemes, all industries, all improvements in agriculture, all means of communications, in short all projects will need finance. And the check to the tempo of development will consist in the difficulty of finding money to finance it. If at all some arbitrary limit is fixed to the increase of the national dividend during a certain period of time it will be because of the difficulty of getting money in adequate amount,

In private unplanned economy finance is obtained through the device of borrowing. And the planning authority or the State also has this very device to fall back on. Whether it is the private industrialist or the State matters little. What really matters is that there should be capital available for investment. There is always a certain amount of money which the people can spare from consumption and thus make available for investment. The amount they can spare depends upon their income, their wants and the prices of goods they consume. Where income is less equally distributed more money can be spared. Where prices of consumption goods are low, particularly those of necessaries and comforts, more money can again be spared. In India to-day only that money can become available for investment which is surplus above necessary expenditure. The poor people, for instance, can save nothing and lend nothing. The planning authority has to determine this available surplus of income; not merely the surplus that exists to-day but the surplus that is likely to accrue in the future as planned economy progresses. Of course this surplus is not a rigidly fixed quantity. It depends partly on the rate of interest. A high rate of interest will perhaps become necessary In the beginning to draw out funds for investment purposes.

We cannot, however, depend on Internal finance only till we have developed our resources fully and utilised them to the greatest advantage. That is, we shall have to borrow money from foreign capital markets. For a planning authority it will not be difficult to borrow money from foreigners. Whether tils an internal loan or an extrnal one it has to be paid back with interest. But that should not be a difficult job. Since the money would be put to productive use there would be sufficient income out of

which to pay the interest. And the principal would of course be paid off from the sinking fund.

If the total supply of money (and credit) does not increase while development proceeds, the prices would fall and thus money-surplus would accrue to our economy out of which it would be possible for us to nay the interest.

As far as foreign toans are concerned the payment of interest would require export of commodities or services. For, in the absence of gold or any other medium acceptable to foreigners, commodities would be the only available means of payment. To enable us to pay interest in terms of goods a suitable foreign trade and foreign exchange policy would have to be adopted. In fact, the success or failure of the entire plan would depend largely on the particular foreign trade policy we adopt. The greatest danger to guard against would be (fair or foul) competition from foreign markets.

While borrowing would be the main source of finance, it may become necessary for some time to take resort to inflation of currency. The injection of currency into circulation is only another method of borrowing money from the people. But the difference consists in the fact that whereas in ordinary borrowing the lender gets interest and the principal is paid
back to him after a time, in the case of inflation the
lender does not get any such payment. It is a compulsory loan, is irredeemable and does not bear
interest. Though in ordinary times no economist
would advise the government to inflate the currency,
perhaps there is much to be said in favour of such a
polley in times of need such as our country is likely
to experience when planning is undertaken. In any
case, inflation would be the last resort of the planning
authority.

This brings us to the end of our task. We began by pointing out the meaning and necessity of planning. We then stated the object of planning, namely, maximum production of wealth compatible with a happy and healthy life. We then broke up that object into two fundamental objectives: fair distribution and economical production. These, as we have said, are interdependent. Either of these objectives requires the adoption of a number of measures. We have enumerated and explained each of them. Finally, and in one word, the aim of planning is to ensure maximum possible welfare.

# PRINCIPLES OF GANDHIAN **PLANNING**

S. N. AGARWAL

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Against the background of different economic and social plans of Europe and America, Principal Agarual has briefly, yet critically, pointed out the ments of Gaudhian Planning He has attempted to show how in the peculiar and complex social structure of India, her time-honoured 'silloge communism' is a sound and scientific economy The lofty principles which Gandhian Planuing propounds are bound to have a place of their own even when rapid industrialization may come to be proposed and followed

HE present age is an age of Planning. All over the world we are being deluged with numerous Pians, 'New Deals' and Reconstruction Schones. Like the advertised mediums, each plan professes to be the best, and the popular imagination has tendency of investing such plans with a miraculous potency capable of curing all our economic ills. Of course, Pianning is not at all a bad thing; on the other hand it implies vision and wisdom. We are, however, not to forget the fundamental idea that Planning is only a means to an end and not an end in itself. The effectiveness of a Plan will ultimately depend on the objectives it aims to achieve.

What, then, should be the main objective of economic planning? It is not enough to say that the aim is "to raise the standard of living by doubling the present per capita income within a period of 10 or 15 years," Economic values can no longer be divorced from human and cultural values of life; for, a man does not live by bread alone. Nor is it enough to say that the aim of Planning is 'full employment'. Employment is only a means of securing material necessaries and comforts. It cannot be the chief objective of a sound and all-round economic Planning.

#### WESTERN PLANS EXAMINED

Let us study the various Plans that have been so far tried in different countries of the world. There are three distinct types. The first is the Fascist or the Nazl Plan, but in this case, the remedy is undeniably worse than the disease. The German Fouryear Pian of economic self-sufficiency, undoubtedly, reduced unemployment by measures of armament and nation-wide frantic preparations for war. The nation was armed to the teeth and German people were taught to prefer 'guns' to 'butter'. The Fascist economy proved to be essentially a war economy. It was is the well-known Beveridge Plan, It's chief objective is

highly explosive; it did explode and shook the world to the very foundations. Aithough attempts were made to appease the labour class in the name of a 'corporate state' and 'national socialism'. 'Big Business' continued to pay the piper and call the tune. Fascism itself is a form of decadent and hence aggressive capitalism. In Italy and Germany, individual liberty was ruthlessly subordinated to the totalitarian control of the state. "Man is the measure of all things", said the Greek thinker, Protogoras. But instead of man, the State has now been made the measuring rod of all our principles

The second type of Planning has been tried in the United States of America, I refer to President Roosevelt's 'New Deai'. As a matter of fact, the New Deal was not a Plan in the correct sense of the word It has been a series of expedients designed to see capitalism safely through a bad time. It was a determined attempt to reconstruct the capitalist structurewith the help of a few clever and timely devices. It was no permanent cure of the inherent disease; only symptoms were treated as a temporary measure to tide over the crisis. It is needless to go into the detalls of the measures which were adopted by President Roosevelt. Suffice it to say that the 'New Deal' cannot be regarded as a sound and scientific Plan designed to establish a new social order.

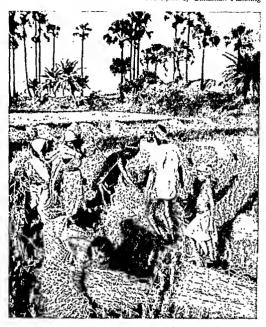
Great Britain, in keeping with her conservative traditions, had been following the policy of 'drift' in the sphere of economic planning as well. Up till 1914, she furnished an almost perfect example of a planless economy. After the last Great War, Britain was forced to resort to certain measures of Planning owing to the prevailing conditions of trade and commerce. But she did only what she had to do under the stress of circumstances. The latest attempt in this direction form of another Treaty of Versalles, the world shall, once again, rush headlong Into another greater catastrophe, the disastrous consequences of which we shudder to visualise. Any plan of lasting peace and prosperity, therefore, must be essentially founded on non-exploitation which is the essence of non-violence.

The third Ideal of Gandhian economy is the recognition of human values. Orthodox Economy has been laying chief emphasis on money and profits. To Gandhiji, 'Man Is the supreme consideration', and 'Life is more than money'. Khaddar Economics is wholly different from the ordinary. The latter takes no note of the human factor; the former concerns Itself solely with the human. True economics eannot be divorced from ethics. The economie law that man must buy in the cheapest market and sell in the dearest is, to Gandhill, 'the most inhuman among the mixims laid down by modern economists'. "It is sintul for me to wear the latest finery of Regent Street when I know that, if I had worn the things woven by the neighbouring spinners and weavers. that would have elothed me, and fed and clothed them." "Khadi spirit," says Gandhiji, "means fellow-feeling with every human being on earth." Khadi represents human values as against mere metallle value. Gandhiji:

> "The value of an industry should be gauged less by the dividends it pays to sleeping shareholders than by its effects on the bodies, souls and spirits of the people employed in it. Cloth is dear which saves a few annas to the buyer, while it cheapens the lives of the men, women and children who live in the Bombay chawis."

Economic Planning, therefore, according to Ganhiji, must be primarily based on the recognition of human values. All the western plans fall short of this ideal, as they attach the greatest importance to money-and materfal advancement.

The fourth fundamental principle of Gandhian economy is the dignity and sanctity of manual labour. Gandhiji maintains that our mental and moral development is dependant on our physical work. The Basic Scheme of Education, originally outlined by the Mahatma, is based on this very principle of 'learning



Healthy Economic Co-operation and Community Work during harvest time in Village India
Phata & F Fearman

through doing'. The correlation of hand-culture and mind-culture has been scientifically proved by modern educationists and psychologists. Apart from the morai and mental values of simple life, Gandhili discourages large-scale production and industrialisation because without maximum self-sufficiency by virtue of our manual labour, we are liable to get inextricably involved in the chain of economic serfdom and exploitation. He contends that the aim of all our activities should be the natural development and unfoldment of our personality in an atmosphere of freedom and economic independence, at least so far as the minimum necessities of life are concerned. The present industrialism exploits the 'surplus value' of human labour. In the Non-violent society of Gandhiji's conception there will be no room for this exploitation of humanity. Gandhiji, like Carlyle, regards 'Work as worship' and in his scheme of things there is no place for modern industrialism which concentrates wealth in the hands of a few and reduces human beings into cog-wheels and automatons.

\*VILLAGE COMMUNISM\*: ITS DECISIVE PRAC-TICAL MERITS AND ITS APPROPRIATENESS TO THE INDIAN GENIUS AND CULTURE

These principles of Gandhian Planning are not visionary and unpractical. These principles formed the basis of the ancient Indian Village Communities or Gram Panchayats, which existed in this country from times immemorial. These Village Republics were self-governing little communities which produced almost everything that they required for their economic welfare. Sir Charles Metcalfe, the then acting Governor General of India described these Communitles in eloquent terms and opined that the Village Republics 'contributed more than any other cause to the preservation of the people of India through ail revolutions and changes which they suffered." These Village Communities, however, could not survive the imperialistic policy of the East India Company, and, as R. C. Dutt remarked in his 'Economic History of India', "One of the saddest results of British Rule in India is the effacement of that system of Village Self-government which was devcloped earliest and preserved longest in India among all the countries of earth." To think that these selfsufficient village communities disappeared from the scene on account of the normal course of economic development is far from the truth. As Prince Kropotkin remarked in his book, Mutual Ald':

"To speak of the natural death of the Village Communities by virtue of economic laws is as grim a joke as to speak of the natural death of soldiers slaughtered on a battle-field."

The ancient Indian Village Communities had evolved a well-balanced social, economic and political system by eschewing the two extremes of laissez-faire and totalitarian control. They had developed an ideal form of co-operative agriculture and industry in which there was scarcely any scope for the spoliation of the poor by the rich. Production was almost simultaneous with consumption and distribution and the victous circle of 'money economy' was conspicuous by its absence. Production was for immediate use and not for distant markets. The whole socio-economic structure was founded on non-exploitation and fellow feeling. That is why Gandhijl has been vehemently advocating the revival of ancient Village Communities. Of course, these communities cannot be revived in their strict ancient form; neceesary modifications will have to be introduced in accordance with modern conditions. The fact remains, however, that the Village Communities once constituted an ideal form of planned economy, and if those ideals are again utilised and adopted for economic reconstruction, we shall be able to present to the world an economic order which will make for lasting peace and prosperity instead of bloody war and destruction.

During recent times, the ideals of village communism and decentralised cottage industrialism have been conspicuously successful in war-torn China. Nym Wales in her book, 'China Bullds for Democracy' gives us a vivid and fascinating account of the working of the Chinese Industrial Co-operatives When the

Japanese invaded China a few years back, the whole Chinese national economy had almost crumbled down. But the vision and courage of a few Chinese young men saved the nation from complete annihilation. They formulated the scheme of Industrial Co-operatives which are now the glory of China. The whole economic organisation of the country which was being bombed to pieces is now presenting a stiff and almost invulnerable front to Japanese aggression. These decentralisd co-operatives are economically self-governing and self-sufficient, producing with manual labour and small machines all the necessaries of life like food, cloth, paper, soaps, oil, glass, chemicals, drugs, iron goods, machine-toois, leather goods, hospital equipment, and furniture. As Nym Wales observes: "The Industrial Co-operatives provide not only the best but the most feasible form of Industry for China in the future, as at present." Edgar Snow expresses the same view about the 'Guerrilla' industry of China: "Not only could it heip to win the war in its final phase, but If given a chance, it could fulfit the original hope of its founders to create a happy economic foundation on which to build the future of China along democratic, peaceful lines."

As is sufficiently well-known, Japan too is the home of small-scale 'domestic' industries. These 'dwarf' units produce not only consumption goods but also machines. Unfortunately, these small-scale units in Japan are co-ordinated and controlled not by Co-operative Communities as In China, but by a few blg capitalists. The fact remains, however, that small-scale communities can and should be able to survive the modern industrialism by establishing a happler and healthier world. Decentralised cottage Industrialism in accordance with Gandhian ideals is desirable from the blological standpoint as well. Mechanised production in urban areas has a tendency to mechanise life itself with the result that the natural instincts of sex and parenthood are deprived of their normal vitality. Prof. Hogben, the well-known English blologist, analyses this phenomenon with penetrating intelligence:

"In tiral surroundings where children grow up in contact with the recurrence of parenthood in animals and plants, the process by which life renews itself are accepted as natural events. In the city, reproduction is an unwarranted intrusion of hospital practice on the orderly routine of a mechanised existence. The machine which neither creates nor begets sets fashion of human relationship."

Biologists, therefore, are now pleading for a 'Back to Village' movement in order to plan for 'human survival' itself.

The organisation of small and self-sufficient rural communities Is not a difficult task even from the agronomical point of view. There has been, of late, extraordinary development in the science of agro-biology, and it is now possible for all countries to grow various crops within themselves without depending on imports from other territorial units. Agro-biology has enabled not only different countries

but also their regional economic units to be selfsufficient. For a fuller study of the subject, readers are referred to Dr. Willcox's book. 'Nations can Live at Home.'

Besides the biological and sociological considerations, the Plan of decentralised co-operative industry is essential from the standpoint of international peace and harmony as well. Large-scale production, whether state-controlled or privately managed, inevitably leads to participation in the frantic race for foreign markets which, sooner or later, ends in bloodthirsty wars and brutal massacres. That has been the sad experience of the last two centuries. That is why Gandhiji has been against the present International Gandhiji is not against international economy. trade, as such; he will like to have international trade only if it satisfies the real wants of different nations on a basis of mutual interest. But the present imperialistic trade has no place in his Planning. "Don't you see that if India becomes industrialised," asks Gandhiji, "we should need a Nadirshah to find out other worlds to exploit, that we shall ourselves have to compete with the naval and military power of Britain and Japan and America, of Russia and Italy" The National Planning Committee also defined their aims as "the attainment of national self-sufficiency for the country as a whole without being involved as a result of such efforts in the whirlpool of economic Imperialism."

Viliage Communism, based on cottage industrialism, is thus not a Gandhian fad; it is sound and scientific from various angles of vision. Sir William Beveridge, of the British Social Security Plan, while discussing a similar Plan for India recently remarked; "India's industry would probably expand, but it is important that it should be properly distributed to avoid the dreadful sprawling towns that we have in this country and the United States."

The distinguished European thinker, Coudenhove-Kalergl, in his book, 'Totalitarian State against Man', has suggested the establishment of 'Agricultural Co-operatives' as a final and lasting solution of all the ilis of the war-weary world. The noted French economist, Hyacinthe Dubreull, has shown that "even the largest industrial undertakings can be organised so as to consist of a number of coordinated but self-governing groups." Even Henry Ford, one of the greatest industrial magnates of the world, admits that "as a general rule, a large plant is not economical." "Big business, keeping service to the public always in mind, must scatter through the country not only to obtain the lowest costs, but also to spend the money of production among the people who produce the product,"

Thus the general trend of world thought is towards decentralisation and village communism, which are the basis of Gandhian economic ideals. Let us not imitate the West which is now reaping the rich harvest of 'dragon teth' that have been sown all these decades. India must evolve a Plan of economic organisation which shall be congenial to her genius and culture. Such a Plan will set a fashion for other countries as well. The blue-print of such an indigenous Plan based on Gandhian principles of national economy shall not only be most suitable for India, but will also demonstrate to the world the possibilities ovolving a new economic order which will lay the lasting foundations of 'peace on earth and good-will among men'.

# REGIONAL PLANNING

Dr. BOOL CHAND

Dr Bool Chand, M. A., Ph. D. (Lond.), Professor of Political Science, Benares Hindu University, Eenares, is an acknowledged Authority on Public Administration. He is General Editor, the Minerva Series, Author of One Party State', "German Government' and "Japanese Government". He is an eminent scholar and critical forbillems of Economics and Political Science.

Dr. Bool Chand offers below some suffestive and constructive proposals for Regional Planning of India in the light of her special geographic and economic wealth. His reference to the United States and U.S.R. on particular is most illuminating. He has carefully examined Prof. Compland's recent research in this connection. Dr. Bool Chand's criticism should prove useful at this juncture both to the Government and the thinking public.

HE procedure of economic planning involves three essential elements It involves, in the first place, a preconceived social objective: it aims, in the second place, at the maximisation of the available resources of production: and it seeks to secure, in the third place, a right distribution of the resources of production, a corelation, that is to say, in accordance with the social objective set, of the market demand with the resources of supply. The determination of the social objective which a scheme of economic planning would be designed systematically to achieve must obviously be regarded as the proper function of a central planning authority. The central planning authority might also perhaps lay down in broad terms the plan according to which the available resources of production of the country are to be maximised or the right distribution of those resources to be made. But In the case of a country so vast as ours the detailed elaboration and the execution of such a plan ought profitably to be entrusted to regional authorities.

These general conclusions are borne out by the experience of Soviet Russia, where economic planning on a wide scale was first attempted. Ever since the Five Years' plans were thought of in Russia, planning and the supervision of the execution of the plan had been entrusted to the hands of All-Russian authorities acting over the entire field of the Soviet Union. Centralised planning had always been advocated to be the best method of securing a perfect adjustment between supply and demand and of overcoming the tendenly towards over-production. But in 1934 a fundamental change was felt to be needed and was ultimately made in the organisation, by recognising a distinction between the drawing up of the general plan and its supervision and execution, and by entrusting the supervision and execution of the plan to regional authorities under the control of the

separate constituent republics of the U.S.S.R. This change was not applied to agriculture or transport, which were still retained under centralised control; but it was applied over the whole field of industrial production. The reasons given for the change were that the centralisation of control had led to a great amount of delay and avoidable red-tape and bureaucracy, and that supervision over the great distances of Russian territory could not be effectively maintained. In the case of India, other considerations might also be invoked to justify the creation of an arrangement similar to that established in U.S.S.R. in 1934. Due to differences of climate, patural resources, practical potentialities, and sometimes pure historical accidents, there have arisen great differences in the economic development and the social and cultural life of the various provinces and territorial regions of India, and therefore any economic plan, not explicitly based upon communistic ideology, must, to ensure its successful execution, amply consider these differences and provide for its detailed operation with special regard to the cultural conditions of each area.

#### REGIONAL PLANNING: Supra-Provincial Regions

In India, then, both in its conception and in its ultimate execution economic planning must be fundamentally regional. The Indian constitution is federal in its character, in which the Centre and the Provincia ces have their respective responshilities. Provincial autonomy exists over a large field of subjects. But there is a basic discordance between the present administrative divisions of India and the physical and economic facts of the country, so that no planning will be really effective without the creation of supra-Provincial regions in certain areas. The view, it may be mentioned, which insists on centralised control of planning in the belief that India possesses a geographical unity and that the economic life of the country and its various Provinces and States is true

to one uniform pattern is actually as unrealistic as the view which thinks in terms of Provincial and State plans only. In all countries with a federal constitution, the constitutent States have to come together and formulate a common policy for economic development of certain areas. The Second Report of the Reconstruction Committee of the Government of India also recognises that regionalisation is one of the fundamental principles of economic planning, and that it is probably the best means of assuring that the different parts of the country would benefit in as equal a measure from planned progress as is compatible with the physical features and natural resources of each part.

The principle of regional planning has been accepted by the authors of the Bombay Pian also. Aithough not concerning themselves with the question of the machinery and organisation of pianning, they have accepted the principle in broad terms, for they recognise the need for regional plans and for the general over-riding of conflicting political jurisdictions in the interest of the working of the plan. The Reconstruction Committee of the Government of India has given an even fuller recognition to the principie They have indicated in their Second Report that the Provinces and States should in the first instance formulate plans of their own, which will then nave to be put together and readjusted to yield a plan for the whole country. At the same time they mention that in certain areas regional plans will have to be drawn up. Regional plans, it may be pointed out, are of necessity different in their character from the plans that individual Provinces or States may formulate for themselves in the light of their special needs

or special conditions. A regional plan refers to the area which may, by reason of the nature of its resources, be considered as a single economic unit, regardiess of whether it is subject to one or more political authorities.

### THE TENNESSEE VALLEY

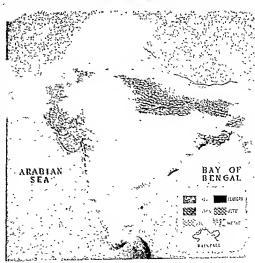
### AUTHORITY

The most effective illustration of a regional plan that has been usually given is the Tennessee Vailey Authority in the United States, The Tennessee river rises in the Aileghany mountains and flows for about 900 miles till it joins the Ohio. Its basin covers an area of some 40,600 square mlies and includes portlons of seven States of the Union-Tennessee, 53.8 percent; Alabama, 13 percent; Kentucky, 2.7 percent; North Carolina, 11.2 percent; Virginia, 8.4 percent; Georgia, 2.7 percent; and Mississippi, 0.9 percent. The area possessed rich undeveloped resources of soil, forest, water and minerals, but the place was inhabited by a predominantly agricultural community which "was not only losing its more enterprising members who sought to better their iot eisewhere, but in its efforts to make a

living was also fast destroying the means of making it". The grievous situation could not be remedied by State action, since several States were invoived in the area. Only regional planning and regional control could afford a solution; and in 1933 President Rooseveit persuaded Congress to pass an Act establishing a Tennessee Valley Authority, which was charged with "the broadest duty of planning for the proper use, conservation and development of the natural resources of the Tennessee river drainage basin for the general social and economic wealth of the nation" but whose sphere of activity was limited to such inter-State matters as the control of floods. the improvement of river navigation, and the deveiopment and transmission of electric power. Within this field the Tennessee Valley Authority has done much directly in the course of the last eleven years, and outside its scope it has obtained to a steadily increasing extent the voluntary co-operation of the State and local authorities.

The Authority was established at a time when the world was in the throes of the gravest economic crisis ever recorded. The government of U.S.A. had been taking the desperate course of restricting production and destroying produce in the hope of restoring economic welfare. The Tennessee Vailey Authority economic welfare. The Tennessee Vailey Authority economic an attogether different conception of the management of a modern nation's economic resources. It represented an economic policy of hope and expansion in which the Government would play a dynamic part. Its establishment was an attempt to raise the economic level of a great depressed and under-developed region, and it achieved spectacular success. By means of the building of dams and re-

"India's Flenty, '-her Lountilal and varied agricultural wealth, spread over her natural pattern ol geographical decisions. This makes Agricultural Planning comparatively easy.



The division into the above four regions raises fundamental difficulties, of which Professor Coupland himself was not quite oblivious. The Ambala Division of the Punjab belongs to the Ganges and not to the Indus Region. Orissa has a marked individuality of Its own; it possesses its own river-basin. And anyhow the Mahanadi links it with C.P., so that its inclusion in the Ganges Basin is quite unwarranted. The Deccan ls in no sense one, but must obviously be demarcated into a number of river-basins. But, although conscious of these difficulties, Professor Coupland was inclined to ignore them in his desire to find 'an interesting and original' solution of the polltical problem. To his statement that in order to work a long-range plan a regional delimitation of the country by river-basins would be convenient, there can be no exception. Most of present-day Indla lives on rivers. Many millions of people depend directly, and many more indirectly, on irrigation; and the possibilities of economic welfare largely depend upon the proper use of the country's vast water-power. Hydro-electric installations will not only facilitate industrial development, they will also benefit the great majority of the population which must always gain its living from the soll. Between several Provinces, at the present moment, where one river happens to be shared by more than one autonomous unit, there is a sharp conflict as regards the proper utilisation of the waters: to prevent such conflict, there ought to be a joint governmental control of irrigation and the use of the river waters in general. Hydro-electrical development is being likewise undertaken on a Provincial basis and ought in the interest of harmony and proper utillsation of the hydro-electric resources be controlled by a super-Provincial regional authority.

#### CONCLUSION

Professor Coupland's suggestion for the division of India into regions by river-basins is founded upon the experience of the Tennessee Valley Authority. But the Professor misses the whole significance of the idea when he proposes to raise the river-basin regions to the level of permanent administrative divisions of the country. He seems to imagine that the Tennessee Valley experiment can be conducted only in a river-basin. It is true that in the case of the Tennessee Valley Authority the resource to be developed was a river and, therefore, the watershed was an area which could be delimited for special attention, But for resource development the proper area may be less than a square mile, a mine, or it may embree a whole continent, as for transport and power. The character of the resource would be the key to the

character of the area of development, and the selection of the regions and the resources whose development is to be assisted would have to be based upon a periodical expert survey of the geological power and soil of the country. It would be clearly very unwise to demarcate the country into a number of permanent political divisions on the basis of river-basins and specifically entrust those divisions to the control of different communal governments so as to make any collaboration between them practically impossible. India's resources are multifarious. So the regions to be developed would be multifarious in character.

The Tennessee Valley Authority must be viewed primarily as a striking model of a development scheme organised by a nation for the welfare of one of its under-developed regions. The United States government might have quite justifiably chosen to follow a different policy; in the period of a grave economic depression it had actually been following a policy of restricting production and even destroying produce, The Tennessee Valley Authority was established in the first instance as a means of providing employment to the people on the construction tob and in the industries providing the construction and operating equipment. The question of using the developed resources to raise the standard of living arose only later. but it was boldly faced when it arose. Development of resources led to inevitable adjustments in the industrial activities of the richer areas. At one time the coal-mining interests and coal-miners were actually perturbed at the extension of the area in which the Tennessee Valley Authority conducted hydro-electric operations. But the policy of hope and expansion was confidently followed, and has been fully justifled by its results.

The question is whether the economically and industrially developed areas in India would recognise the value of national assistance similarly given to the under-developed areas within it. This is the crux of regional planning. India's industrial development till now has been very lop-sided, there has been an extreme concentration and localisation of the country's industries. This has been largely due to the localisation of our Iron and coal resources. But the lineament of hydro-electric development may possibly act as a corrective. The Government of India has already declared that its policy is "to secure the development of electric power on a regional basis." The regional development of electric power must be combined with a really integrated national development policy, and this presupposes a deliberate regionalisation of new developments,

## PLANNING AND POPULATION

### D. G. KARVE

D. G. Kurre, M.A., Principal, Brihan Maharashtra College of Commune, Poons, is a leading educational and suther of several books on History and Economics. He is an active Member of the Indian Economic Association and Prevident Exert of the Indian Economic Conference, 1999.

In the article below, Principal D. G. Karek has made an elaborate and thought-provoking analysis of the population problem and changing recoming of India during the last four decades in relation to the population trends of some of the countries of Europe. With a critical and searching study, he has altempted to show that the population trends and tendences of a country, although co-related to its general economy at any point of time, need not yet hamper the country's much to a balanced and progressive life. He sounds a healthy note of assurance both to the conomists and section that they need not fet apprehensive about the increase in population offering hudrances to the implementing of their respective plans. Principal Karre's approach to the problem is both serious and impleius.

NEW, even among the new and industrially advanced countries of the world, can afford to say that their population trends are satisfactory. The cause for concern, however, arises in different countries from different aspects of the situation. Speaking about the European continent, the North-Western countries have urgently to seek a solution for the problem of dwinding population, while the Eastern and Southern countries have yet an excessive population pressure to deal with. It is no exaggeration to say that in the East there is aimost a universal trend towards excessive population. The New World and the colonies in Africa and Australia represent areas which are obviously underpopulated. Thus while almost every country has a population problem its nature varies from region to region. Every country must, therefore, tackle its own problem in the correct historical and economical context.

While the problem of excessive population would have been with us even in the absence of a declared policy of planned development, a new urgency and a fresh orientation have been imparted to it by our determination to realise for our country a substantially enhanced standard of life in the near future. Piquancy Is added to the whole discussion by a view extensively held, among experts as well as reformers and administrators, to the effect that our population trends bid fair to nutilify a large portion of the good resuits to be expected from adoption of a policy of economic planning. While few have dared to recom-

mend that in view of our population trends economic planning should not be adopted for the present, there is an appreciable body of opinion which is somewhat pessimistic about planning on the score of population, and even a larger number would make a vigorous policy of population restriction an integral part of any scheme of planning. I am convinced that the pessimism is unwarranted and the emphasis misplaced.

Let us first note what characteristics of the Indian populaton have been causing concern. At the beginning of this century the total population of India, which then included Burma, was 29.4 crores. According to the Census of 1941, when Burma was no longer a part of India, the population was nearly 39 crores. The rate of increase is striking, but except in the last two decades it has not been steady. The percentage of increase for the four completed decades of the present century was 6.4, 1.2, 10.6 and 15.1, the two earlier decades having witnessed serious and extensive visitations of famine and epidemic disease. Infant mortality is high, though It has steadily registered a decline from 205 per 1000 live births in 1911 to 199 in 1921, to 181 in 1931 and 160 in 1940. While there is some difference of opinion among the experts as to the correlation between this obviously striking rate of increase in the population and the rate of increase in the per capita income of the people two conclusions stand out prominently from the mass of available statistics on the subject. Taking the

period as a whole the total wealth of the country has at best just kept pace with the population, and the augmentation of wealth has not been evenly distributed among areas or classes. The situation is thus of general economic development unaccompanied by any striking increase in the standard of life of the people as a whole who continue to lead almost as precarous an existence today as they did at the commencement of the century.

It is not surprising that advocates of crude Malthusianism should feel themselves vindicated by this record. A comparative stationary standard of life in association with steady economic development is plausibly explained away by reference to the almost equally steady rise in the total population. That the increase in population has been intermittent except for the last two decades has been construed as lending further point to conditions of sustained pressure. It is made out that even with the increased production of wealth the tendency towards excessive population is so persistent that only a recurring natural scourage like a famine or pestilence has succeeded in restoring balance. The moral deduced from such an interpretation is obvious, unless the Ideas, habits and institutions of the Indian people are so altered as to ensure a slower increase in population no amount of economic reformation will improve the general standard. In fact in the absence of such an Improvement in the habits of the people economic development might actually enhance the size of the problem and render it less easy of solution on account of the further exhaustion of economic resources. If this line of reasoning were to prevail, the prospects for economic reform, leave alone economic planning, would be poor indeed, unless the people are first transformed into practising birth-restrictionists.

Anybody who is aware of the conservative habits of our people would completely despair of economic and social betterment in India if this conclusion were truthful. Fortunately, there is abundant reason to believe that the underlying reasoning of the pessimists' case against economic and social reform is unsound and that it is belied by the experience of all the countries of the world which have successfully realized the Ideal of a high general standard of life. Nowhere in the world has a lowering of the effective birth rate - the difference between the gross birth and death rates,-preceded or even accompanied the transformation of the economic system from a static agricultural into a dynamic industrial society. This transformation, usually described as the Industrial Revolution, has in all cases produced a uniform population pattern. The immediate result of the economic betterment brought about by the technical and organisational changes is to augment the rate of Increase in the population. In the initial stages economic betterment leads to a rise in the birth rate and a fall in the death rate thus causing population to grow even at a higher rate than is normal in the prerevolutionary period. Only after the material wellbeing has had time to produce the natural changes

in the ideological and institutional life of the people is a lower fertility rate induced.

These deeper and far-reaching trends of population growth in the context of modern industrialization are well brought out in a recent publication of the League of Nations. In an Intensive study of the Future Population of Europe and the Soviet Union conducted by the Office of Population Research at Princeton University, the complex nature of population movements is presented in a revealing style. It should be recalled in this connection that, while we sometimes assume Europe to be a whole and developed industrial area, as a matter of fact between the North Western part of Europe on the one hand and the Eastern and some of the Southern regions on the other the differences are almost as significant as those between Europe and Asia, to which latter Soviet Russia naturally belongs. The process of industrialization and the attendant modernisation of outlook and habits has been from West to East and thus the whole historical process of the impact of modern industry on population trends is fully revealed, at its different stages, by a study of Europe and Sovlet Russia as a whole

The historical and statistical evidence on this inevitable sociological phenomenon is indeed very strong. But before presenting it the following conclusions to which the authoritative survey draws pointed attention may be adduced so as to create among Indian thinkers a proper sense of perspective regarding this all limportant question.

> 'In every country where it has been experienced, the Industrial Revolution has been associated with rapid population growth'

> 'The fall of the birth rate came later than the fall of the death rate, but eventually gained even greater momentum'

And again on the subject of the relation between the spread of the small family system and the attainment of a higher material standard the following observations are conclusive:—

'The emergence of the small family pattern is in major part due to the voluntary control of fertlity, principally through contraception. The draving force stimulating such control lies in social economic incentives Modern urban society places a high value on the individual as opposed to the family or the groups, sets great store by the advancement of the individual in health, education, social and economic status, and makes child-bearing an expensive undertaking The simple fact is that it places heavy economic and social penalties on the parents of large families There are strong inducements to parents to have only a few children to whom they can give 'every advantage' These inducements have been strong enough to bring the fertility of upper and middle classes of the urban population to very low levels. The hopes and aspirations of these classes are sweeping rapidly into the lower economic groups and rural populations With them is carried the small family ideal."

It will thus be seen very clearly that the weight of authoritative opinion is on the side of those who urge that, for the introduction of our schemes of economic reform, we ought not to wait till the small family pattern is adopted by the people nor need we be pessimistic about the ultimate results of economic progress. A rational outlook on life is as much an effect as a cause of a higher material standard of living, and if we continue to seek the co-operation of the people in their own economic betterment that fact will inevitably and in due course lead to the widespread adoption of the small family system. The environmental pressure of modern industrial society is too obvious in that direction to be missed. In fact, unless at an appropriate stage suitable institutional precautions are taken the swing of population may be too heavy in the wrong direction,

A comparative study of the birth and death rates in European countries and India would show that even now the Indian situation is undergoing an important transformation which is a recognised stage in the inevitable sequence of population effects following the introduction of modern industry into a predominantly agricultural and rural country. How some of the European countries adjusted their death and birth rates to the new influences is illustrated in the following table compiled from available information on the movements of population in these countries. A death rate below 20 may be said to mark an advanced stage of improved hygienic conditions, and a birth rate below 30 may be said to mark the beginning of the process of declining fertility. Using these broad indicators an attempt is made in the following table not only to show when the two movements started in several European countries but also to indicate the element of a time-lag that invariably exists between the commencement of a low deathrate and a low birth-rate period.

_	Country		Approximate year of achieving a death rate under 20 fall of birth rate below 30		
1.	Scandinavit		1860	1980 (Sweden) 1890 (Rest of Scandinaver).	
2,	Rugiand		1830	1890	
з.	Netherlands	٠	1890	1910	
4.	Italy	٠.	1910	19.0	
5.	Bastern Europe and		1920	1930	
6.	Rumania	:-	1930	Not Yet	
7.	Soviet Union		1930		

As against these figures for the countries of Europe at differing stages of their industrialization the following figures for India would appear to carry their own message.

\( \text{Vear} \)		Birth Rate	Death Rate	
1901-05 Average		 38 07 33,42		
1936-40 Average	•••	 33.4	22,60	

The Indian birth and death rates are unmistakabiy moving as per usuai pattern and in my opinion the significance of the comparatively high rate of population increase during the last two decades is to indicate that we are passing through the upward spurt which follows the earlier period of the Industrial Revolution. While there is no data on which to base any accurate prognosis as to future trends, I feel that the period of a steeply falling birth-rate is not far off. The case for Malthusianism is based on the mistaken assumption that rapid multiplication is more natural than deliberate restriction. Whatever may be the truth of this view for nonhuman life the evidence of modern industrialism is conclusive as to the spontaneous adjustment between the prospects of an improving standard and the conscious limitation of the size of the family. The adjustment is the result of human reaction to changing socio-economic structure and it spreads, as the League of Nations Survey records, 'from upper classes down, and from large to small communities and rural areas!

India is predominantly agricultural, Indian agriculture is not very productive, our industry is for the most part disorganiezd and non-mechanical and our social life is overwhelmingly rural. The population trends inexorably associated with this type of society are those which are usually described as heavy pressure. If a survey of our resources, in respect of natural environment and human effort, were to establish a conclusion that we have used all these for all they are worth even with the help of the most advanced technique and organization, a deliberate policy of birth restriction may prove to be the proper economic solvent. Though no such extensive survey has yet been carried out-in fact it would be the first desideratum in any scheme of planned economy - there is not the slightest doubt that both in respect of the quantum of our total resources as also the efficiency of the methods of their exploitation a very considerable progress is possible. With such a prospect before us for any one interested in the economic betterment of the people the only straightforward course is to persist with greater vigour and comprehension in the path of industrial progress.

Paradoxical as it may seem, industriai progress in a predominantiv agricultural country ought to begin in agriculture. I do not wish to refer in this context to the comparatively minor issue as to how much capital in a given initial period of planning should be spared for agriculture as compared with other sectors of the national economy. To forge the tools of efficient agriculture it may be necessary to pass through a preliminary period when it appears that greater attention is paid to industry than to agriculture. But it is almost an axiomatic truth that no agricultural economy can be transformed into a balanced and industrial economy without the rationalization of agriculture itseif. The Industrial Revolution in its broadest sense has almost invariably included an Agrarian Revolution and, more often than not, the

latter has preceded, or at any rate accompanied, the rapid transformation in industry.

How close is the relationship between progressive agriculture and reduced pressure on land is best illustrated by the following table.

Country				Wheat yield	Persons occupied in agriculture per sq Lm.
France				15	34
Germany				22	47
Hungary				14	34
Crechoslovakia				17	45
Austria				16	48
Poland				11 5	55
Rumania				9	57
Greece ,				9	62
Yugoslavia			-	11	64
Bulgaria				12	67

Wheat Yield 1933 to 1937 (Quintals per Hectare) Person occupied in Agriculture per sq. Lm. of cutilwated area about 1930.

That, as a rule, the low yield countries are countries with the highest population pressure is not as surprising as it may appear. The methods of cultivation are so primitive that they rely more on the easily cultivable portion of the soil and on the manual labour of the people. With improved methods of farming, pressing into the service of man all the fruits of modern science and organization, not only can a more extensive area be brought under cultivation, but the employment of human labour per cultivated acre tends to fall. The same rationalization that adds to the yield reduces pressure directly by lowering the ratio of workers per acre and indirectly by altering the outlook of the peasantry, who find in the small family a pattern of social behaviour which conforms to the other purposeful and rational aspects of their environment. Even the enthusiastic supporters of the birth control movement will, I hope, appreciate the difference in receptivity between a rural population as poorly equipped mentally and materially as the present one and the kind of people that a rationalized system of agriculture will bring into being.

It is not suggested that even in its most developed and rationalized form Indian agriculture can employ most profitably such a large proportion of the population as it a present does. A development of new industries and the transformation of the existing ones are equally called for. Per employed worker the industries will produce even a larger quantum of wealth than agriculture. Apart from the superior productivity of industry, granting always that it has an efficient agricultural sector on which to draw both for the supply of raw materials and for the disposal of mished products, industries give rise to that large scale urbanization of the country which has, as a single factor, the most effective influence

on the trends of population. Even the deliberate adoption of the policy of dispersal of our manufacturing industry will in this respect mean no material change as far as the preference for the small family pattern is concerned. The kind of life—on work and off work — that is associated with a mechanized industry which for economy has to be conducted on a substantial scale gives rise to mental attitudes and social environments inimical to a large family unit. The regularity, the mobility, the constant alertness, and the engulfing of the individual's being into the collective process—all hinder the unrestricted play of impulses. Even in dispersed industrial centres conditions of housing are likely to be such as to seriously inconvenience large family units.

In all its forms, therefore, industrialization and the attendant transformation in the technique and organization of subsidiary avocations is bound to react on the population situation so as appreciably to reduce the effective birth-rate. A rationalized agriculture and a modernized industry can hardly come into being without a course of instruction which cannot but rouse the reasoning capacities of the scholars. This general effect of the educational system as also the daily contact with the technical processes of scientific agriculture and industry will work a veritable revolution which is the inevitable intellectual or moral counterpart of the industrial revolution In any economic and social system, for work as well as for relationships, it is the whole being of the citizen that is trying to get adjusted to the environmental conditions. If we transform our agriculture and industry so as to utilize all that modern science and organizational experience has to teach us I have not the slightest doubt that population trends will work in the direction of keeping up and raising the per capita income of the community,

Two prominent features of the normal course of population movements in other industrialized countries suggest an important lesson for the Indian planner. A fairly long period of a rising population trend and a varying yet appreciable time-lag between the commencement of the process of a falling death rate and a falling birth rate have been mentioned as almost universal. In this, as In other attendant features of economic transition, a more deliberate and planned action is now rendered possible. As in the sphere of the technical transformation of industry we are no longer content to leave things to be adjusted by the workings of the Individual's desire for betterment and profit, so also in this sphere of the adjustment of population trends a policy of educating the public as to the demographic implications of a planned industrialization ought to be followed. In so far as the public becomes consciously aware of the desirable tendencies in respect of their habits which have a bearing on the population trend, their conduct is the sooner affected in what for the time being is accepted as the right direction. While we need not rule out educative effort in this sphere there is no occasion to feel pessimistic about the natural reaction of the people, much less to falter in our steps on the path of intensive industrialization. What propaganda and education will fail to achieve will be more imperceptibly, but all the more certainly, achieved by the inevitable effect of rationalization of agriculture and modernization of industry.

The other widely noticed feature of population movements is the excessive degree to which the trend towards a falling birth rate has gone in countries where industrialism has been associated with a regime of private capitalism. A steeply declining birth rate and the danger of depleted personnel result not so much from industrialism as from excessive individualism, 2 While It is essential in the present stage of our social evolution to create among our people a healthy sense of individual responsibility for individual betterment, care has to be taken to see that individualism does not run amok. It may, at first sight, appear to some people that family, group and caste are such deep-rooted institutions in our country, that there is no danger, at any rate, no immediate danger, of a sense of collective loyalty being weakened among the masses of our people. I do not think that there is any valid ground for such complacence. In fact, current trends, which have been developing for some time and have been fully revealed during the abnormal years of the war, are far from reassuring.

In a sense, the physical uprooting to which the introduction of large-scale and scientific methods of production inevitably leads a people, also causes a mental and a social uproofing. In their new environment and fresh relationships the people forget old ties much sooner than they acquire new ones. As an integral part of the ideological propaganda that has to accompany the workings of a planned economy the inculcation of a national purpose, a collective loyalty and a sense of social responsibility must be consciously attended to. These qualities will indeed be essential for the continued stability and welfare of the community in all respects. But it is no mere accldent that they will also produce on the population situation an appropriate effect at the succeeding stages of industrialization. Nobody can say when the anti-natalist blas of social policy may need a change either in favour of stabilisation or in favour of an active population policy. The economic, moreover, is not always the decisive consideration in this respect. But if the people are gradually accustomed to think and act in an atmosphere of balanced Individualism and collective concern the prospects of a satisfactory and timely solution of our population problems at all stages of our economic evolution would be considerably heightened.

Even in the old world, India with its hoary past must be considered an old country. Not only have we a very high population pressure but our resources, especially our agricultural resources, have been long-under human exploitation. While modern science and organization will materially add to our prospects of improving the standard of productivity we ought

not to put out of our minds the prospect of relief through emigration. For old over-populated countries emigration is a natural and beneficent policy. Though recent history and contemporary politics may create a misleading impression in this respect we must not forget that all along we have been a colonizing race. With the loss of Industrial and political power the vigour has gone out of our colonizing expeditions. But even during this period of national set-back, fortunately the habit has not altogether vanished. Indian settlers and traders may even now be found in all parts of the world. If the declared objectives of the spokesmen of the United Nations. of whom India is one, have any meaning, the open areas in the Pacific, in Australia and along the shores of the Indian ocean ought to be freely available for the colonization of Indians. While it will be inappropriate in this place to go into the details of this subject we must make up our mind to let no opportunity of-external colonization go by default, Emigration and colonization ought to form necessary planks in any platform of a planning commission set up in India.

While the subject of foreign emigration is complicated by the corresponding attitudes of other interested countries, planned internal migrations and colonizations suffer from no such extraneous impediment. In the planning of regions it is only too obvious that in certain areas it may be found that there are not enough people to supply the human effort for the most efficient utilization of the available resources and in certain others even in an intensely developed condition all the available personnel will not be fully employed. While we cannot hope for a perfectly satisfactory co-ordination along these lines, it is clear that as far as possible we should make an effort to relieve concentrated pressure by internal migration on a planned and community basis. Even small advantages along this line of progress ought not to be neglected.

In a programme of planning the quality of the population matters even more than the quantity. In the spheres of health, education and general efficiency a conscious effort will have to be made to enhance the prevailing standards. With the improvement in the quality of the population goes the greater possibility of its easier adjustment to the new economic and social conditions. Such direct aids to a desirable population policy as the institution of contraceptive and eugenic clinics are already passing into normal medical practice. In any centrally planned scheme of the development of health services along with other specialised medical assistance, clinical help in respect of contraception must also be made available.

In my opinion, no planner need be deterred by rear as to the probable reactions of his plan of economic development on the population front, nor need he pay unduly exaggerated attention to population trends. Take care of the economy and culture of the community, and population will not only take care of itself, but will play its appropriate part in the general scheme of a balanced and progressive life.

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employed in the organisation of production for exchange. Naturally, in a scheme of competitive utilisation of economic resources, a certain "unemployment" of "factors" - of which labour is one - is inescapable, and as technical progress goes on accelerating the rate of production in all industries, a definite volume of "Idleness" of factors is generated in the process of competitive administration of natural and human resources in any given zone. The most urgent problem of economic adjustment today, is that of reducing the frontiers of Idleness which technical progress in the general structure of production in the rural and urban areas all over the world creates in its wake, and the problem assumes a special significance in a country like India where "unemployment" of factors is not the specific creation of technical progress as such. As Sir William Beveridge observes: "If the grant Idleness can be destroyed, all other aims of reconstruction come within reach. If not, they are out of reach in any serious sense and their formal achievement is futile."

In our country the problem of full employment resoives itself into several problems of economic adjustment. (a) the problem of stabilising the economic position of 106 millions of agriculturists (in 1931), (b) the problem of stabilising the economic position of thirty millions of agricultural labourers: (c) the problem of stabilising the urban wage-levels and facilitating urbanisation of an adequate volume of rural population; (d) the problem of interoccupational adjustment of "employment-density" through management of wage-trends; problem of maintaining the economic stability of the national economic system with international post-war economic trends through periodical readjustments of agrarian and industrial costs and (f) the problem of maintaining economic stability through periodical management of wage-fluctuations and adequate control of rural and urban costs of living commensurate with the volume of "employable" population which has to be fitted into the national productive system and with the exigencies of inter-occupational adjustment of employment density.

Against such a background, the gravity of the problem of stabilising the economic position of the rural population becomes acutely pronounced, especially when we note that by 1962, the authors of the Bombay Plan anticipate the settlement of a further working population of 23.4 millions on our roral resources (1063 millions in 1931 and 129.7 millions in 1962) though the ratio of the increased population is said to be only 58 per cent to the total working nonulation in the country as against the 72 per cent for 1931. The obvious conclusion from a study of these data is that more land must be brought under cultivation in order (a) to stabilise the rural standard of life at a higher level than that existing today, and (b) that the average output per acre must be increased so that each square mile of our rural zones a population density as great as Japan with all her lation. Extensive cuitivation in our rural zones

implies stabilisation of agrarian prices at a level which would enable the cuitivator to bring an adequate portion of the 110 million acres of "cultural waste other than fallow" and 58 million acres of "fallow land" under the plough in the maze of competitive margins in which his scheme of production has to seek its economic balance. Greater extension of cultivation, to the less fertile agrarian zones which have been left fallow owing to the operation of economic laws of choice today, would mean stabilisation of primary prices at a level which would certainly affect wage-trends in the urban zones of the country and reduce the degree of flexibility of the industrial cost-structure and its potential to sustain any appreciable structure of employmentdensity or to balance its cost-structure in the postwar economic conjuncture of renewed international competition or to absorb any appreciable volume of "employable" labour at wage-levels which would balance the structure of real wages and incomes between rural zones and urban areas of the country.

### THE PRESSING NEED TO STABILISE THE ECO-NOMIC POSITION OF RURAL AREAS

Increase of output of produce per acre in a comprehensive drive to reduce rural costs of production and to sustain a heavier rural density of population in the post-war epoch in our country would imply enciosures and an adequate rate of rural depopulation-which, in its turn, includes the readjustment of the structure of real wages in the industrial zones of the country to implement such a nation-wide interzonal migration of labour. The gravest problem affecting the proper conservation of our rural resources today is the economic endeavour of the average cultivator all over the country to grow foodgrains on his "uneconomic" farm and to balance his structure of production in an internationalised grainmarket. Writing about the agrarian problems of eastern European countries which are faced with such an economic situation, Sir E. John Russell has made certain observations which are pertinent to any proper understanding of the agrarian problems of our country. He says "The lack of capital drives the peasants to grain production, the cheapest but least lucrative of all arable systems; it is suited to the wide open spaces of North America, Australia, or the great plains of the U.S.S.R., where there is far more land than can be closely occupied but it is much less appropriate to regions where there is pressure of population on the land." (Agrarian Problems from the Baltic to the Aegean, Royal Institute of International Affairs, 1944, p. 10). The problem of balancing the structure of our rural production in an internationalised market for food-grains becomes coiossal when we note that in India we are producing today, on an average, only 988 lbs of rice per acre as against an average world production of 1440 lbs and of 2433 lbs. in China, 3070 ibs. in Japan and 1680 lbs. in the U.S.A. And with this poor rate of production, each square mile of our country was pretending to sustain a population density as great as Japan with all her industrialisation (248 per sq. mile in India in 1940 and

250 in Japan for the same year.) with over seventy per cent of our population engaged in agriculture! Nor has the pressure of population shown any tendency to fail since 1901. In 1901, India had to sustain on its resources 179 people per sq. mile, which increased in 1911 to 191, to 193 by 1921, to 213 by 1932 and to 246 by 1941. There were also tracts in our country which were attempting to sustain on their resources as heavy a population per sq. mile as Germany and United Kingdom (which had a population-density of 371 and 501 respectively in 1936) while in India, Bengal had accumulated a populationdensity of 779 in 1941, Bihar following with 521 per sq. mile and Madras with 391. In 1936, if, with a population-density of only 228 per square mile, the problem of poverty in Poland was so acute that "m some districts of southern and eastern Poland, a peasant could not afford a whole match for lighting his fire; each one was carefully split into four parts before being used" (Agrarian Problems from the Baltic to the Aegean pp. 45-46), what can we say of India where on each square mile of territory as many as 248 persons are trying to find employment and economic stability with three persons out of every four engaged in exploiting the resources of an uneconomic patch of land? It should be patent to ail who care to bestow the requisite amount of thought on the subject that there can be neither "employment" nor an adequate standard of life for the rural masses of the country as iong as the production scheme of our rural zones is dominated by two factors of economic stagnation; (a) uneconomic agrarian holdings and (b) grain-production on subdivided and fragmentated units of rural production. Adequate food and employment for the population of the country imply several economic adjustments: (i) If we aim at economic stability, we must aim at reduced costs in food-production through enciosures and scientific agriculture, with rural depopulation to sustain such a reconstruction of rural production; (ii) we must switch over to the production of "protective" foods and commercial crops and conserve internal and external markets through standardisation of agrarian production and import food-grains from the more efficient zones of production either within the country or from abroad. Stabilisation of agrarian prices, so long as we persist to seek balance for our structure of primary production in a competitive framework of economic administration, is impossible of achievement without drastic and delicate adjustments in the general structure of the economic life of the four hundred million people of our country and certainly mere stabilisation will not ensure full employment for the vast agrarian and industrial resources of our country and will end by creating greater economic and social distress than what it pretended to alieviate. The authors of the Bombay Plan propose to implement a programme of full employment in our rural zones by three schemes of economic readjustment : (a) introduction of mixed farming i. e., cultivation accompanied by dairy farming, market gardening etc., (b) cuitivation of more than one crop a year with the help of better irrigational facilities and increased use of manures, and (c) provision of subsidiary industries ... iike spinn-

ing and weaving, shoe-making, paper-making, tanning, gur-making, soap-making, oil-crushing, fruit preserving, basket weaving, flour and starch making. It is imperative that we realise that as long as there is no definite movement towards enclosures in our rural zones and as long as our rural producers have no economic incentive to substitute grain-production by the production of "protective" foods and raw materials which are suited to medium-scale and small farming which dominate our rural economy today, rurai India cannot aspire to maintain either adequate employment for the economic energy of her growing population or economic stability in her administration of her resources in the hard days of post-war economic rehabilitation. In this conjuncture, the proposals sponsored by the authors of the Bombay Plan should sound interesting. After asserting that "large fluctuations in agricultural prices" are among the important factors which have prevented agrarian progress in India, they state that in order to check these fluctuations. Government should adopt "a policy of fixing fair prices. In fixing a fair price, account should be taken of the cost of living in the area concerned as well as the cost of production" and go on to observe that to prevent depression in the prices of specific agricultural commodities as a result of foreign imports, the volume of imports should be regulated by means of tariffs or by fixing quotas". Neither a protective tariff nor a quota system would maintain an adequate structure of empioyment in rural areas or make for economic stabiitly in post-war national economic evolution but would only jeopardise any adequate structure of empioyment by distorting wages and freezing costs in the rural as well as in the urban zones of the country, It is high time we realised in this "benighted" country that we cannot attain any degree of economic stability born of productive efficiency in our national economic system by artificial instruments of economic adjustment like the tariff and the quota system. Our economic stability must be attained only through reorganisation of our rural and urban production-schemes to sustain a heavier density of population through stabilisation of the general standard of life and through adjustment of urban and rural costs to internationalised markets in primary and secondary commodities, commensurate with international trends in technical and economic progress.

### ECONOMIC ADJUSTMENT AND THE PROBLEM OF FULL EMPLOYMENT

The problem of full employment in India can be resolved Into several aspects of economic adjustment. To mention just two: (a) the pressure of population on land in the rural zones must be relieved either (i) by generating a movement towards inter-occupational adjustment of employment-density by managing and regulating wage-trends so that the structure of real wages in urban zones is stabilised at a level which would facilitate from the rural zones of the country, or (ii) by raising the capacity of economic resources of rural zones to sustain the present density of population through better balance in agrarian production;

(b) Full employment of the labour potentialities of the ever-growing bloc of "employable" population through the development and progressive co-ordination of regional special industries which can be implemented without generating any serious dislocation of the essential industrial structure and without reducing the employment-capacity of the urban zones of the country. In aiming at economic rehabilitation for India in the post-war epoch we must not lose sight of the fundamental problem of economic evolution: that we have to solve the grlm economic problems of employment and standard of life for a volume of "employable" population which goes on increasing in volume every year by fresh additions into the employable age-group, and yet plan economic life in the rural zones so that each acre and square mile of land produces enough to implement an adequate standard of life and employment for a rapidly progressing volume of employable population. Otherwise, we can neither achieve a higher standard of life for the rural producers nor implement an economic programme which would provide for the economic utilisation of the labourpotential of the population, for the full development of the natural resources of the country, without which all economic planning and reconstruction would be futile.

It is obvious that an adequate programme for full employment in rural zones would necessitate certain fundamental schemes of economic reconstruction. (a) bringing of more land under the plough; (b) better balance in agricultural production; (c) better animal husbandry; (d) regional specialisation and allocation of agrarian production between grain-cultivation and culture of protective foods: "this change," as was diagnosed in East European countries, "will require more labour and the use of more fertilizers and better animal husbandry, and will therefore yield far higher returns per acre and per man than rain; it will then given a higher standard of life to the countryman." (Agrarian Problems from the Baltic to the Aegean, p. 11); (e) development of interzonal and international trade in agrarian commodities; (f) development of complementary rural zones; (g) development of special regional industries; in short, proper economic conservation of the rural resources of the country (including conservation of the economic energies of the population) for the purpose of raising the capacity of land to sustain an adequate structure of employment-density per square mile. It would also include (a) industrialisation calculated to absorb the redundant labour-power which rural conservation would release from its structure of production and (b) ample provision for the full utilisation of the economic energies of a progressive volume of population-both rural and urban.

In such an economic background, the structure of occupational distribution of population visualised by the Bombay Plan could hardly be said to be either daring or adequate; nor can we anticipate that the capacity of each square mile of our resources to sustain any appreciable structure of employment-density would be raised under such a

scheme of economic reconstruction (Occupational Distribution: in 1931, agriculture: 72 per cent of the total working population and industry: 15 per cent of the total working population. In 1962, agriculture: 58 per cent of the working population with 26 per cent in Industry—(vide A Plan of Economic Development, Part II, p. 9.) If we achieved this anaemic structure of occupational distribution in fifteen years, considering the growth of population and the volume of labour-power which would be generated in the period, we shall have to wait for a considerable time before we are able to raise the general standard of life through a satisfactory programme of full employment for the economic energy of the working population of our country.

In this connection, it should be interesting to note what Sir Ardeshlr Dalal is reported to have said at Madras, "After all agriculture was the corner-stone of the economic structure in India No matter what the progress of the industrial development might be, the vast majority of people in this country must continue to live by agriculture." (Report in THE HINDU of 26th January, 1945). He seems to have proposed "stable and reasonable level of agricultural prices" to stabilise Indian agriculture, though he has admitted that the problem of "how to ensure such stability of prices was a difficult question." (Ibid). If, as is admitted generally, agriculture must remain, for a considerable time to come, the economic destiny of the majority of four hundred million people of this country, it is imperative that some serious thought is invested on the problem of reconstructing the rural economy of our country so that the capacity for "employment" of the structure of rural production, as well as for implementing a satisfactory standard of life for a progressive volume of population may be considerably increased for ensuring economic adjustment. But the difficulty is not so simple as to be solved by giving rural producers some small subsidy by way of stabilised prices for agricultural commodities, nor will such a readjustment arrived through price-stabilisation set up a rural economic conjuncture which will utilise the economic energies of the "employable" population of the country, without which no substantial rise in the general standard of life in our country can be sustained. Nor can we ignore the grim economic consequences of stabilisation of agraman prices on the pace and capacity of the industrial structure of the country either to maintain its economic stability in the general economic system of the country or to implement any adequate programme for stabilising the structure of real wages in urban zones - without which no scheme of industrialisation in a over-ruralised country like India can be economically implemented.

The problem of adjusting urban wage-trends to implement a comprehensive programme of readjustment of occupational density of population through fuller employment and at the same time to synchronise urban wage-fluctuations to the dynamics of competitive industrial costs is not as simple as it sounds. Only a structure of urban real wages higher than those in rural zones could initiate inter-occupa-

tional movement of iabour, while such a wage structure would reduce the competitive efficiency of the industrial structure with a lowered capacity for the absorption of employable labour. Today the structure of real wages in the urban zones is such that 10 per cent of the urban labour-force in any industry is always absent and thirty per cent is off at harvest time. If the task of regulating the structure of urban real wages to implement a programme of full employment through inter-occupational adjustment of employment-density is an impracticable endeavour in the present economic conjuncture in the country, there is only one other way of ensuring adequate real wages in industries, by regulating the industrial cost-structure through technical reconstruction and better localisation, so that it can absorb a heavier structure of money-wages without reducing its economic efficiency. Such reconstruction of Indian industries can be effected by (a) decentralisation of industries; (b) reduction in the size of the industrial units; (c) better localisation to reduce transport charges; (d) development of special 'de luxe' industries with the relative advantage of special markets; (e) Institution of up-to-date technical improvements in production to raise the productivity of industrial units and to enable the industrial cost-structure to sustain a heavier burden of money wages. It must be the realisation of the futility of adjusting the structure of real urban wages to facilitate inter-occupational adjustment of employment-density that has induced in many quarters in India the belief that cottage industries are inevitable in any adequate scheme of post-war economic rehabilitation in our country. The argument of subsidiary cottage industries to implement a programme of "fuller" employment in the rural zones of our country is akin to the economic piatitude which Mr. Amery discovered fifteen years ago (Empire and Prosperity, 1930) when he said: "It is obvious to ordinary common sense that there is more employment in making an article ourselves than in buying it abroad", to which Sir William Beveridge retorted: (Tariffs - the Case Examined, 1932, p. 61) "So there is more employment -much more employment, absolutely no end of employment - for a person who tries to build his own house and make his own shoes and cook his own food and do every single thing for himself, whether he can do it well or badly. If any Free Trader is so foolish as to doubt this, let him try making his own bicycle! That, however, is the kind of employment which means starvation and drudgery. Employment by itself is not prosperity, Employment means prosperity only if it brings a good return for the effort it involves."

### THE MEANING OF FULL EMPLOYMENT:

Maximum Employment with Proportionate Real Incomes

In such a background, the conception of full employment for India does not mean mere increase of employment hours for the employable section of population; but full conservation of the economic energy of the people so that each hour of employment brings in enough real wages and incomes to

sustain an adequate standard of life for the population of the country. Such a scheme of economic reconstruction for our country which aimed at economic conservation of the productive energies of the "employable" section of the people so as to maximise the return for every hour of employment would mean complete overhaul of the structure of production in the rural as well as in the urban areas of the country to sustain such an employment drive. It will have to start with an intensive economic survey of each region and zone in the country to implement an adequate programme of full employment. Such a programme would mean reorientation of agriculture through giant enclosures for grain-production in zones under irrigation and with relatively uniform soil-fertility; better balance in agricultural production, through specialisation-zones and crop-planning where economic contours do not permit the emergence of enclosures for intensive and extensive cultivation; decentralisation of industrial units to regulate the costs of urbanisation; better localisation of industries; more flexible wage-standards; development of inter-regional and international economic co-ordination and all other schemes of economic and technical readjustment which are essential to a comprehensive plan for the economic conservation of the natural and human resources of the country, Such a scheme of economic administration would mean a comprehensive circumscription of post-war economic evolution to efficiently implement a coordinated programme of full employment in our country.

An adequate programme of economic circumscription of post-war evolution in our country would mean, besides control of production-trends in rural and urban zones with management of wage-fluctuations, (a) control and effective management of the banking and investment structure of the country in order to eliminate undue fluctuations in real wages and incomes arising from monetary factors operating through the national price-structure-such a control including control of the bank-rate, management of speculative dealings on the stock exchanges of the country and regulation of the rate and course of short and long term investments through a coordinated administration of industrial and Government finances, and (b) co-ordinated evolution of the national transport system to facilitate post-war rehabilitation of Indian industry and agriculture.

It is high time we realised that post-war economic evolution of the country with a view to full utilisation of the economic energies of our population cannot be planned along traditional lines of economic evolution. The international economic conjuncture in the post-war days in which India will be called on to seek her economic balance will be entirely different from the international system in which she sought her economic destiny till the middle of the present century. India's poverty to-day is the result of her past economic evolution which made no attempt to harness the economic energies of her "employable" population to increase the amenities of life in the rural and urban zones of the country. Its urgent that we realised, as expert observers in

Eastern Europe have done, that "the great problem of the area today, that of over-population, can be turned into its greatest wealth" (Agrarlan Problems, p. 86) only through a comprehensive scheme of postwar economic conservation of national resources so as to increase the productivity of each unit of labour in the country. The most urgent problem of economic administration in the country today is not that of finding employment somehow for the 170 million people in the employable age-groups, but that of seeking economic balance between wages and output consistent with national economic stability and international trends in technical and economic reconstruction in the post-war epoch. Few could dispute that "the goal of economic effort is not employment but wealth". (Sir William Beveridge.) If "employment" were the goal of post-war economic planning in India, or if mere increase of output the objective of economic evolution and if either of them could solve the problem of poverty in India, the task of post-war economic reconstruction in India would be simple and all our economic troubles could be charmed away by mere industrialisation. In the post-war epoch, the problem of maintaining economic balance for India with her huge population, which can be relied on to keep up its rate of six million additional souls per annum, (which by itself can easily neutralise any scheme of economic reconstruction that experts of today may devise) is not easy of solution. The only road to economic progress and a higher standard of life in the country lies along a deliberately balanced and comprehensive scheme of economic conservation which brings to each individual emerging into the "employable" bloc of the country's population, an adequate reward for every hour of work that he contributes and assures for each labourer a "day" of eight hours of such work for twelve months in the year, whether he is employed in agriculture or industry or transport or public services or in domestic service or in any other avocation that he chooses to follow.

It is imperative that we realised, late though it is in the day, that without reconstruction of our post-war economic evolution to sustain such a comprehensive programme of "full employment" with all the delicate balances in the structure of real wages and incomes which it implies in the rural as well as in the urban zones of our country, our economic barge would drift inexorably into the sea of economic stagnation, of which J. S. Mill warned us long ago. No programme of economic reconstruction planned along pre-war lines can rescue the economic system of the country from its precarious economic plight today or save the population of the country from the rigours of a fast sinking standard of life.

## MONEY—ITS UTILIZATION IN EXPANSIONIST PLANNING

D. R. SAMANT

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Prof. Samuel has, In this article, attempted to tack to one of the most complex and technical questions of public pauses. He has made out a strong case for the use of created many—a subject highly contracteristic amonged present day cronomets. He has very ably touched the allied asyrcts of effective supploments, the has very ably touched the allied asyrcts of effective contracted amonged present day consumption, prices and enges and has attempted to show verys of pushing the economic properties of a backward country like lattic by highestay adoquate and truly slows of new many or to bring obtain a well thought out scheme pictities optimize consoner welfare. Prof. Samuel stopic of technical and this facile bill if offers an immand of scope for practical thating and sound remaining.

HE aim of all economic activity is economic welfare. The amount of economic welfare that a community can enjoy depends upon the quantity of the economic resources available, and the way in which they are used. The same resources, when used more efficiently, will produce a greater amount of welfare. A community will attain a state of maximum weifare when all the labour available for employment in that community is employed in the most efficient manner possible under the given state of techinical progress. This is the highest level of prosperity that a country can attain with the given resources and technical knowledge. Though the highest point of prosperity for any community at any given time is thus fixed, the community actually may be at any low level of prosperity owing to lack of employment and efficiency; and once that community reaches a state of equilibrium at any low level of prosperity, it will remain there indefinitely unless positive efforts are made to lift It up from that low level to a higher one.

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An economic policy which is applicable and destrable in the case of full employment leads to disastrous effects when applied to economies suffering from under-employment. The classical economists, by denying the possibility of under-employment equilibrium, have rendered a great disservice to all poor countries. They have not only failed to show the path of prosperity to economically backward countries but have actually misted and misguided them, thereby unnecessarily perpetuating all the avoidable miseries of poverty.

### UNDER-EMPLOYMENT EQUILIBRIUM AND THE WAY OUT

When a country suffers from under-employment, which in economically backward countries means less productive or inefficient employment, the remedy lies in the expansion of investments. According to the orthodox economic theory, expansion of investment can take place only at the cost of consumption. So, investment must come out of savings. The margin for increasing savings is very small in a poor country. Besides, whalever increase in employment in the investment goods industries is brought about in this way is just by way of compensating the fall in employment in the consumption goods Industries. So the total gain in employment is negligible; not only that, but there is every possibility that the case might turn out to be entirely negative. That

the production of investment goods cannot be increased without contracting the production of consumption goods is correct only in the case of full employment equilibrium. But when the same policy is applied to an economy al under-employment equilibrium it leads to undesirable effects. In the case of under-employment equilibrium investment and consumption both can expand together as they stand not in competitive but in complementary relation to each other.

It is also wrong to believe, as is done by the supporters of the classical economic theory, that the economy of every country will automatically move to the state of full employment equilibrium. Really speaking, an exchange economy based on private enterprise can reach a state of equilibrium at any level of under-employment. And once an economy set stuck at a particular equilibrium level, however low it may be, it will not move forward of its own inherent forces.

Whenever, therefore, an economy reaches a state of equilibrium without reaching full development, it is the duty of the central authority to follow a policy which will set the economy on a forward march For, whatever the extent of under-development and unemployment, the economy wili not move forward under private initiative. Any progress from this stagnant level is possible only if the effective demand increases. It is, therefore, necessary for the State to come forward undertaking investments partly with new money which will increase demand and create scope for further private investments. This alone can take the economy to a higher level Such external incentives to private investment will have to be administered periodically until a state of full expansion possible is attained.

### MONETARY EXPANSION AND PRICES

The monetary expansion implied in the investment policy adumbrated above will be strongly objected to by the orthodox economists on the ground that it will lead to inflation. This fear of inflation has unnecessarily held up the economic progress of backward countries. In fact, so long as there are unused resources, any increase in the effective demand arising from the increase in circulating medium is sure to be matched by increased supply. This of course does not mean that there will be no rise at all in prices as a result of the above recommended expansionist policy. The increase in effective demand resulting from an increased supply of money is sure io spend itself partly in price rise. But this need not be taken as a danger signal or a sure sign of pure inflation. When production expands as a result of increased demand there is bound to be some rise in prices owing to a number of factors other than pure monetary inflation. For instance, prices may rise if expansion of production has to be carried on under conditions of diminishing returns. Similarly, when there is increase in the aggregate demand, prices of commodities subject to inelasticity of supply will rise. This will happen even when there are unemployed resources available for the production of other com-

modities. Under such a condition, to give up an expansionist policy because of the rise in prices of the former type of goods will mean to allow unemployment to continue in respect of the production of the latter type of goods. Prices may also rise because of a slow rise in wages owing to increased demand for labour resulting from an increased demand for goods. Such a rise in wages is not due to the existence of full employment but to the competition among the employers to be first in drawing upon the unemployed resources. Wages may also rise as a result of every group of wage-earners trying to exploit the increased demand to improve their lot. It will be wrong to suppose a price-rise resulting from any one or more of these reasons as infiationary. Such price-rises are bound to be there in every case of expansion. Under the system of private enterprise production will expand only in response to increased demand; and every increase in the aggregate demand is bound to spend itself partly in price-rise owing to imperfections of economic organization. If the increased demand is directed to products the supply of which cannot be quickly increased, it will result in causing a temporary rise in price which after the necessary lapse of time will disappear. Of course, given sufficient notice, such price-rises can be avoided

### SUPPOSED HORRORS OF INFLATION

It is a noteworthy fact that the authors of some of the unofficial plans for the economic development of India have not tabooed monetary expansion. But they do not seem to have recommended the use of new money with full grasp of the economic significance of such a policy in the expansionist programme. What matters, according to them, is the attainment of the investment targets; how the investments are financed is not of much significance. This can be seen from the observations on this problem made by the authors of the Bombay Plan. 1 which can be taken as representative of all the plans that envisage the use of new money. In paragraph 87 of the first part of the Pian they say, "Our object in this section has been to indicate the sources from which the capital expenditure required for the plan may be met." So they do not attach any special significance to the ways in which the required capital expenditure is met. This they have made more clear In the next sentence, "The precise form" they add. "in which the capital may be raised, whether by the State in the shape of taxation or government borrowings or by private voluntary investment, is a question which can only be considered, when the plan is ready for execution, in the light of conditions then prevailing". Now, from the point of view of the size of the economy, raising capital by taxations or by government borrowing or by private voluntary investment or by "created money" is not a matter of Indifference. Each one of these ways of raising capital will have different effects upon the size of the economy.

<sup>1</sup> A Plan of Feonomic Development for India; By Sir P. Thakurdas, Mr. J. R. D. Tata, Mr. G. D. Burla & others.

. The fact is that the use of new money is recommended by these writers as a necessary evli without realizing its significant role in the scheme of economic expansion. The use of new money is considered definitely to lead to all the horrors of inflation, and the consequent tears. "Planning without tears", say the authors of the Bombay plan, "Is almost an impossibility". Why planning, which is meant for increasing economic welfare, should necessarily mean tears, even in the beginning, is an enlgma. An expansionist economic plan is meant to reduce tears and its economic merit can be testified only if it goes on reducing tears from the very beginning. When an increase in the circulating medlum spends Itself entirely in the rise of prices. it will cause tears, and nothing but tears, in the short as well as in the long run. But the increase in the circulating medium which increases employment and production need not cause any tears. If an expansionst increase in the circulating medium is carried out in such a way that it does cause tears. then it is of doubtful economic merit, for, how can we say that we have really struck a bargain between the tears and the joys?

Really speaking, there need not be any occasion for tears in the case of an economic policy that is meant for increasing the economic welfare of the population. Tears are feared because of the inflationary effects of such a policy. A plan for the economic development of a country involves a large scale investment programme which may not result in immediate increase in the production of consumption goods. And if part of this programme is carried out with new money it may lead, it is feared, "to a gap between the volume of purchasing power in the hands of the people and the volume of goods available." 1 That there exists such a possibility cannot be denied. As there is increase in the circulating medium there will be increase in the effective demand too. The Increase in effective demand will spend Itself largely in increasing employment while there are unemployed resources. Part of the increased effective demand may no doubt, spend itself in the rise of prices. But so long as any increase in prices is accompanied by an increase in employment it need not cause any tears, and certainly not when the increase in employment is proportionately greater than the Increase in prices. Expansion of employment results in giving a share to the unemployed in the production of the nation. To the extent to which this is accompanied by a rise in prices the share of the newly employed is at the cost of others. But on the whole, this increases the total weifare of the community and tears, if at all, are reduced. Of course, a large dimensional sudden increase in effective demand, even under conditions of unemployment, may spend itself more in raising prices as opposed to employment, as usually happens in times of war. But, then, planning has no significance if it cannot avoid such pos-

The infiationary effect of new money depends not only upon the size of it but also upon the purpose

for which it is used and the place in the economy of the country where it is used. For instance, if the new money is used for the purchase of services, as in times of war, it will bring about a much larger expansion of consumption demand than if it is used directly for the expansion of production. In the latter case, a large part of the new money will circulate for the purchases of producers' goods and will create a relatively smaller pressure on the demand for consumers' goods. The undesirable inflationary effects of the injections of new money can thus be avoided to a great extent if the injections are administered in proper doses and according to a wellthought-out scheme yielding optimum economic well-being From the point of view of qualitative improvement of the economy the new money should flow where it can reap the maximum weifare.

### WHERE THE NEW MONEY SHOULD GO FIRST

The new money to be injected for the purposes of economic expansion should be preferably at such places where it will result in increasing production in a relatively short time without creating any bottlenecks. Thereby the real income of the community can be increased without giving rise to any inflationary effects. This can be achieved if the increased demand is for that type of goods the production of which does not require much of time-taking technical equipment and technical training, the necessary means being available in a form ready for use. Whenever production is found not taking place, irrespective of the resources being readily available. because of lack of demand, the right policy to follow is first to increase the purchasing power in the hands of the prospective consumers and then to help, financially if necessary, the expansion of production, Mere propaganda to produce more or even mere increase in the facilities for production are not in themselves going to be of any use. For, even though the production is increased there will be no demand and consequently, it will be regretfully given up. The first essential thing, therefore, is to increase the demand and this will not happen unless the money income of the prospective consumers is increased. And if this is to be done without affecting other sectors of the economy, and If the new production is to be in the form of net addition, then the demand for these products must be in the form of net increase in the total effective demand. This can be done only by injecting new money in that part of the economy where the production is held up because of tack of demand.

The best illustration of such a situation is provided by the rural areas in India where the population is in dire poverty, suffering from qualitative and quantitative deficiency of food, insanitary conditions of living, and lack of houses, education and medical heip. And all this inspite of the fact that all the resources necessary for supplying these goods and services are avallable in large quantities. They are not used at present because the consumers cannot pay the cost. These goods and services will . be supplied if we enable the prospective consumers to pay for them. Once the additional purchasing

power is injected and the production-consumption circuit is set in motion it will continue to move indefinitely.

The new money to be put into circulation in rural areas naturally will be by way of increased employment, But the initial increase in employment must not result directly in increasing the supply of consumption goods; to a large extent it should result in creating demand for consumption goods. This can be done by creating the initial employment by way of expansion of public works activities, such as the construction of roads and irrigation works, land improvement activities, construction of public buildings in rural areas and works regarding the general lay-out and sanitary improvement of the villages. One Important point to be remembered in respect of the execution of these works is that they must create, as much as possible, demand for goods and services supplied locally. And then only the programme will have the best effect upon the economic development of the rural areas. This net new expenditure in rural areas will create new demand for food, including milk, vegetables, meat, fish etc., for clothing, footwear, furniture and other household articles, and also for services of doctors and teachers. Alongside this increase in demand, steps must be taken to see that the supply of these goods and services is also increased.

The economic development that is brought about in this way will be self-perpetuating so long as the income stream is maintained; i.e. so long as the size of employment is mantained. Though the size of employment will have to be maintained, the nature of the employment will go on changing as the economy progresses. For instance, in the beginning the most of the new employment will be in the field of public works; but as this will increase the demand for consumption goods and services, the employment in the latter occupations will go on increasing. When employment in public works diminishes, it will have to be replaced by some other type of employment such as construction of houses in rural areas. The increased income of the rural population will create demand for many industrial products, thus increasing employment in industries, which should be very widely distributed throughout the country.

But, for all this, it is necessary to inject new money,-new purchasing power-in the rural areas, Production wili not increase unless demand is assured; and demand cannot increase by merely advising people to consume more. If we want the people to consume more, we must first supply them the means to do it. And if these means are to be supplied without injuring other sectors of the economy, they must come as a fresh flow and not as one diverted from some other part of the field rendering it dry. The new money to be injected will have to be in increasing measures in the beginning in order to avoid sudden influx of demand, and then in decreasing measures as the employment becomes more and more self-sustained, ultimately completely ceasing when the economy reaches its full heights.

There is also one more reason why the investments in rural areas should be with new money. If

rural investments result in creating heavy interest Habilities the burden might prove prohibitive for a rapid progress. This can be avoided if these investments are undertaken with new money which the Government can supply almost without creating interest obligations. The interest burden may well be imposed upon those sectors of the economy which can bear it. There is one additional advantage in allowing most of the new money to flow to the parched-up rural areas, especially in the beginning of the development programme. A large part of this new purchasing power injected in the rural areas will remain circulating locally, as most of the wants of the rural population can be satisfied by rural production, and only a small part will filter for manufactured articles. This will naturally check the possibilities of price inflation during the earlier stages of industrial investments.

### SOCIALISATION OF CREDIT

In so far as investment is left to private enterprise It will be determined by the expected rate of profit on new investments, the marginal efficiency of capital. The latter depends upon the rate of interest on the one hand and the size of effective demand on the other. If the expansionist policy results in Increasing employment, it will result in Increasing money income and effective demand. But this rise in effective demand will have the desired effect upon private investments only if people believe that it is not merely a temporary phase. If, for any reason, doubt is created regarding the continuity of the policy, the increase in effective demand will spend Itself in price inflation, making the rich richer. Under a weak state of confidence and a faulty process of formulating the estimates of prospective yield, the rate of return on investments may remain much higher than the rate of interest. Under such a condition, mere taxing of the profits is not going to be of much advantage. This may reduce Inequality but will not add much to the total national dividend. A better policy for the Government to follow will be to expand investments and bring down the rate of return to a desired low level. Instead of allowing capital to remain scarce and earn a high rate of return, and then to expropriate a part of it, it will be better to expand capital and bring down its profits. This not only will reduce the exploitation by the capitalists but will increase the income of all.

New investments on private account will take place, as pointed out above, only if the prospective yield on these investments is expected to be higher than the prevalent rate of interest. The first necessary step to encourage private investments, therefore, is in the direction of keeping the rate of interest low. The rate of interest that affects the private investments in general is not the same as the "bank-rate" which is effective only in the case of short term advances by the central bank. Private investments depend upon the complex rate of interest determined by the varying 'maturities and risks involved. If the cost of capital is reduced by reducing the rate of interest the production of capital will be encouraged. The rate of interest the production of capital will be encouraged.

the risks involved in the act of lending, and also by reducing the number and margins of the Intermediaries. This can be done if the State takes up the role of the financial intermediary. For the achievement of a real low rate of Interest it is necessary that the whole of the banking System, the entire credit organisation, should be brought under the control of the State. All money should be borrowed by the State and lent by the State through a widely spread Statecontrolled banking organization. A real low rate of interest will then be available to private enterprise. The size of advances, short-time as well as long-time. must be determined not by the size of savings collected but by the investment needs of the economy. Of course, credit should be subjected to a strict qualitative control. No credit should be allowed for socially harmful or useless purposes. The rate of interest should vary according to the social importance of the purpose for which the money is borrowed. Similarly, small borrowers may be charged a lower rate of Interest. Every individual account need not be a profit-earning one. The cost of supplying credit to society as a whole should be borne by society as a whole.

The guiding principle of Investment to be followed by the central authority must be to bring down the supply price of capital to the pure rate of interest plus the costs. Wherever capital is found to yield more than the normal rate of return owing to monopolistic or other types of restrictive policies followed by private capitalists, it will be the duty of the central authority to see that production in that line is expanded and profits are brought down. If the economy is found to suffer from under-employment even after the rate of return on capital investments all-round has come down to the desired level, the State will have actively to participate in expanding investments. This will again give an impetus to private enterprise by increasing effective demand.

### PRIVATE ENTERPRISE UNDER THE NEW SYSTEM

Apprehension is likely to be expressed against the general credit and investment policy outlined above, on the ground that it will discourage enterprise by keeping profits low. But such an apprehension is un-

warranted. Of course, all those industries where the production is of standardised nature will slowly pass under direct State control and the rate of return in such cases will not be much above the rate of interest. But where production involves risks and demands enterprise, a margin over and above the rate of interest will be available to remunerate the necessary amount of risk and enterprise. This margin, under the proposed scheme, no doubt, will be lower than its present level. At present, only that amount of enterprise becomes effective, which is accompanied by capital resources; but, as such combinations are scarce, the supply of enterprise has remained scarce and costly. If, under the new arrangement, we are able to make pure enterprise effective, the supply of enterprise will increase and the price to be paid will decrease. There is, therefore, no reason to fear that the proposed financial policy might adversely affect the output of human effort, qualitatively or quantitatively. Thereare no fixed absolute measures of remuneration for human effort. A man will try to do his best in the field of economic activity so long as he cherishes the prospects of improving his economic position by dolag so. The prospects of attaining relative betterment of one's position is, therefore, a sufficiently strong incentive to extract the best human efforts.

The financial policy outlined in this article will not only result in increasing the total national income but will even bring about better distribution of the increased income. The fall in the rate of return on the past accumulations will itself go a good length in reducing inequality of income. The concentration of income will be reduced also as a result of the socialisation of risks and enterprise under the proposed State-controlled investment system. Still further equality of income will have to be brought about by periodical chopping off of large accumulations. The main source of lncome under the proposed scheme will be in the form of personal earnings. A large measure of socialisation will thus be accomplished without affecting to any undesirable extent the freedom of choice or the freedom of enterprise, the two preserves of a free society.

## PLANNING FOR SMALL STATES

K. V. RAO

K V Reo, M A, M. Lett, Professor of Economics, Resembn College, Balanger, is not present the Director, the Resembn Institute of Economic Research and Secretary, the Patine State Post was Planning and Reconstruction Committee, Balangie, E. S. A. Hew the author of "Local Self government Review" and "Common Development of Funct India".

In the article below, Prof. K. V. Roo has prepared a strong case for the argument of economic planning for small States along with the planning for British Ludiu as a hole. He has drawn pointed attention to the fact that is even of the unwerreal strength of these bottes as well as their distribution over the entire country, their very peculiar difficulties in economic planning as nagainst those in by States or British Ludia must be critically staded—for instance, in matters like curvivery, turf and transport lathe only he has conclusively shown hove the small States by following a broad and vive policy of cooperative self-sufficiency in all the different aspects of economic life our hope to achieve in all round prospertly

GREAT wave of enthusiasm for post-war reconstruction is passing over India. It is discernible not only in British India but also in the Indian States. But not many people seem to have realised the true implications of planning for India — a vast sub-continent with eleven provinces and six hundred and odd Indian States. There are two important implications to be realised for successful planning. Firstly, that planning for India without the States is impossible and, secondly, that the problem of planning in the States—specialty the small States, is different from that in the British Indian Provinces.

Very little is known about the economic conditions of the Indian States not only to the outside world but even to the States themselves. I am not referring to the big and enlightened States like Travancore, Mysore, Hyderabad and others, which are a few, but to the vast number of small States scattered all over India where the problem of post-war reconstruction is neither fully appreciated nor fully understood. Blind imitation of western methods of planning or copying of proviacial plans will cause more difficulties and a final break-down. A proper diagnosis of the situation and a weil-directed remedy are what are required.

#### THE PROBLEM

A few fundamental points should be firmly understood before we can appreciate the problem. There are six hundred and odd States in the subcontinent, occupying an area of 712,508 sq. miles containing a population of about 83 millions. That comes to about 45% of the total area and about 24% of the total population of India.

Though known to be separate political entities, these States form such an intricate part of India that planning for British India will be incomplete if not impossible without Indian India.

But each one of these States is an autonomous one enjoying various degrees of internal sovereignty. For a complete and comprehensive planning of India, each one of these States must plan and co-operate with the rest of India. Their plans must take the peculiar conditions prevailing in the States and yet conform to the general All-India policy.

In this respect the problem of the big States is different from that of the small States. The big States are not lagging behind British India in their plans or objectives and they have also resources. The difficulty comes only with the small States which are having only limited resources. The gigantic schemes of post-war reconstruction involving crores of rupees are too staggering for the small States getting a few lacs of revenue a year and in many cases much less.

But the big States are a few and the smail States are many and that is the important point to be realised. The average area of a State comes to 1188 sq. miles and it is about one-third the average area of

<sup>•</sup> Compare the hold declaration of the Hydershad Government with the mild anhalten of the Government of India. The forester says that the objective of their post-war planning is not marely setting the war personnel. The compared of their post-war planning is not marely setting the war personnel. The rest problem is not see final large prior what perlaps may have been done many years back before the outbreak of war. It is a question of the development in the post-war period of agriculture, indicative and the concurrence of the standard of the outbreak of war. It is a question of the raining of the standard of life of the common man. The little ray at that the "ultimate object of all planning must be to raise the standard of lurng of the people on the whole and to ensure employment for all." Planning, page 20 monties of Council, Second Report of Reconstruction Planning, page 20 monties of Council, Second Report of Reconstruction.

a British Indian District. There are only ten States which are bigger than the smallest of British Indian Provinces; only thirty States are bigger than the smallest of British Indian Provinces; only thirty States are bigger than the average British Indian District and there are many States which are much smaller than the smallest of the Indian Districts. Lawa in Ralputana is 19 sq. miles and many of the Simla States are no better than small-holdings.

Revenue resources are no better though revenue is no certain indication of a nation's prosperity. The total revenue (1937) of the ten big States of India was 2147.4 lacs: compare it with the revenues of Bihar, Madras, U.P. and the Punjab (Rs. 4552.6 lacs in 1937) having the same area as the total of the big ten States. The average area of a State in the E.S.A. (whose total area is about that of Bihar) is 1553 sq. miles and an average revenue of 590,000 rupees per State. These States require, on the model of the Bombay Plan', at least 18 crores of rupees each and just imagine the coiossal nature of the problem. Yet these are not small States but medium sized. For example, there are ten States in the Punjab agency having an area of less than 10 sq. miles each, and 21 States whose revenue before the war was less than a lac each.

The second handicap is the fact that the people of the States are comparatively backward in education and similar matters. In India Itself the percentage of literacy is very low and in the Indian States it is worse still.

For any scheme of post-war reconstruction, the hearty co-operation of the people is essential. In no other scheme is it so urgently required as in economic reconstruction. Such a co-operation sbould be based on a perfect understanding of the problem; a blind and dumb co-operation is not worth much. For this we require literate and educated clizens, which will be difficult to get in the States.

Here again the big States are an exception. The majority of the States do not have enough elementary schools even. On a rough average there is one elementary school for six thousand people, one high school for six takhs of people and for six thousand square miles, for example, in the Surguja State in E.S.A. For the whole of Eastern States Agency excluding Bengal States there was not even one coilege till 1944, \* though it covered an extensive area of 62,000 sq. miles. A majority of the people are not accustomed to modern science and civilization. Most of them have not seen a railway line and they still refuse to accept a currency note. This backwardness of the people is a real handleap to the States.

Yet another and a more serious disadvantage of these States in general and small States in particular is their lack of control over the issue and regulation of legal tender money. Sovereignty of States without the control of legol tender money is an anomaly in the economic world and it is this great anomaly that acts as the greatest check to the progress of the States.

I do not want to develop a thesis here but the situation may be explained briefly. Currency and credit regulation are the key to industrial development; and when the key is held by British India, the States find themselves helpiess. They can neither regulate issue nor control the use of money. With a few exceptions, the Indian rupee controlled by British India is the legal tender in the Indian States. If the complaint in British India is that the issue ond the value of the currency are regulated according to British interests, anybody can understand the nature of the problem of the Indian States. A common legal tender like a common standard has got a unifying effect, an effect of fixing the rates of development permanently at the original disparity, thus making it impossible for any deliberate attempt at a rapid pace of development on the part of any of the component units. The first in the race which has the original advantage always retains the lead.

Most of the States suffer from "scarcity of money". The rupee has a comparatively high vatue in the States owing to that scarcity. Most of the transactions are in barter, so that there is no standing stimulus for greater and further production. Frices are low because of inck of markets also, which again reflects badly on the state of communications. Indeed, the situation would have been far worse in the Indian States if the prolific brain of the British strategists in the last century had not thought of connecting all Indian States by railway on military grounds.

To sum up, the diagnosis of the situation in the Indian States specially in the small States as it exists today is as follows. The small States, even if they are all very anxious and enthusiastle to launch on the schemes of post-war reconstruction, find thomselves entirely in an awkward fix in view of the fact that their resources are imited ond their people are somewhot backward. They hove not much of technical staff available and they cannot even afford financially to have a complete survey of the natural resources available within their boundaries. Above all, they have no control over the legal tender money, over its issue and regulotion; this is acting os a great brake to their expansionst tendency.

At the risk of repetition even, I must explain how the money mechonism works in on Indion state,†I have previously referred to the fact that the Indian States generally are "scarcity" areas for money. Now let us take the State as an economic ond political entity, as it actually is, ond examine the situation. Suppose the State wants to start o cotton factory worth Rs. 25 lakhs. It has to pay in rupees. If it obsorbs all the money from internal circulation, then there will be more deflation' and if it wants to create an 'export surplus' it does not hove the mechanism

<sup>\*</sup>A college has been recently started in the Patna State by its enlightened Ruler.

<sup>†</sup> The idea is more fully explained in my book "Post-War Reconstruction and Regional Self-Sufficiency" to be published soon.



Apriculture: Organised by the Editorial Board, with ca-operation of Prat. R. Visweswar Rao, M. A. B. T. Rajkot

### LAND POLICY

### GYAN CHAND

Dr. Gyan: Choud, M.A., Ph.D. (Lond), Professor of Economics, Patha University, President, Indian Demonate Confinence (1933) so in the Consultative Committee of Economists appointed by the Government of India to deal with the question of post-war remonate reconstruction, and is absorptional with different economic Committees appointed by the Got. of Blary, He is the author of Executive of Pederal Disace. Some Amperts of Viscal Reconstruction and Hadra's Person Millions.

In the critete below Dr Gyan Chand has given a very vitid and graphic picture of the present deplayable pointou of the Land Felicy and Orwerthip in India and has consideringly polited on the wed and urgacy of an early selling ion no file interests of various grapps and clauses in our rural economy. In his opinion, a Land Folicy annel at merely grathy improvement stellers in production of distribution aspects is going to be of little anal vuless the roof problem of eventual climination of rural capitalistic leaddorshim is groperly testled. In has further emphasised the disportance of economic consolidation and collective farming as necessary styrs to bring obsent complete rationalisation of agriculture as an important bouch of future economic reconstruction of India.

HERE can be no real economic reconstruction in this country without re-organization and development of agriculture. The extreme poverty of our people is due to our rural economy being inefficient, wasteful and indifferent to human values. Our cuitivators are ignorant, have neither the knowledge nor the resources to use modern agricultural technique and are utterly incapable of adjusting themselves to or mastering the forces which are in the saddle and ruling them as the rest of mankind. They who, taken together, carry us on their shoulders, have, to use Tagore's words, to polish the very boots with which they are kicked by their masters, and though they have shown signs of waking up to the reality of the situation, they are still, in Tagore's words again, 'dumb', ianguishing and stupifled, and have to be given or find a voice with which they may protest against their wretched iot and express the will to change it - to cease to be helpiess masses and become human beings conscious of their position and possibilities. Tolstoy

once characterised the innumerable proposals for bettering the position of the agriculturists in the pre-Revolutionary Russia as the willingness of their masters to do everything for them except to get off their backs. In India, we have to realise that all proposals for rural reconstruction which leave the present agrafian relations unchanged—which in effect amount to the unwillingness of the masters to get off the backs of the agriculturists—will in the long run intensify the evils instead of mitigating or remedying them. Being escapist devices they will serve as boomrangs and make the changes when they come—as come they will—the more violent and disturbing on that account.

There is a general impression that India is a conting of peasant proprietors and that iandiords are confined to only some of the Provinces. This is an entirely mistaken impression. Land in Bengal, Behar, Assam, C.P., Orissa, one third of Madras, the U.P., and Sindh is almost entirely owned

by landiords who are not cultivating the land themselves. In the Punjab 55 p.c. of the cultivated land is cultivated by tenants-at-will and the proportion of such land in the N.W.P. is probably higher. In Bombay, and two thirds of Madras, the peasant proprieters (i.e. Ryots) predominate, but even in this area non-cuitivating proprieters have been gaining ground and a considerable portion of the Ryots are really rent-receivers and do not cultivate the land themselves. In the Indian States, it is well known that feudal conditions are more common and the position of the cultivators, therefore, is depressed to a greater degree, Of the total cultivated area of British India of about 210 millions acres, roughly speaking, nearly 160 million acres are owned by the rent receivers or over nearly 75 p.c. is in their hands over which they exercise supreme rights and excercise varying degrees of control over the life and economic position of the cuitivators in this area. Though reliable statistics for the Indian States are not available, the proportion of the area in the hands of the landiords would at least be 80 p.c. of the cultivated area if an all-India view of the existing situation is taken. This is the outstanding fact of the agrarian position. Over nearly four-fifths of the total cultivated area of the country, the landlords, whatever be the name by which they are known, are supreme.

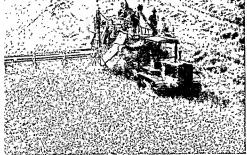
### LANDLORDS, SMALL AND BIG, PREDOMINATE IN THE RURAL ECONOMY OF INDIA

This ali-important fact is, however, to be considered along with another which is no less important. Some of the landfords are big landed magnates and occupy a pre-eminent economic and social position in rural economy. But the number of such landlords is very small. Most of the rent-receivers are men of limited means. The vast majority of them are, as a matter of fact, very small and petty landlords and economically their position is more pitiable than enviable. They have to live up to a standard of living for the maintainance of which they have not got the means. They have been reduced to this position by successive division of property in the last four or five generations and the process is still at work and progressive reduction of the size of their estates is going on. Their life is a constant struggle for existence, and disparity between their needs and means is Increasing. are driven by necessity to adopt a more uncompromising attitude for the protection of their property rights and use them with greater rigour to prevent further diminution of their income. They are more sensitive to the growing independence of spirit on the part of the cultivators and resent more bitterly any curtailment of their privileged position. They are, like the men in marginal social position everywhere, suffering from a sense of insecurity, combined with social exciusiveness. Their poverty, to use Bernard Shaw's words is 'more painful because they do not know how to live poorly' and have to 'keep false social pretences by living beyond their income or no income'. They are poor, pretentlous, unorganizable, but they present a formidable difficulty in the reorganization of agrarlan economy. No statistical estimate of their total number is available. In Bengal there are nearly one lac revenue-paying estates and the number of tenures is 2.7 millions, but of these, landlords with an income of more than Rs. 30,000 p. a. are about 1,000.\*
In Behar, there are nearly 13 lacs shareholders in landed estates and the average size of an estate is less than 30 acres. Figures of these two provinces are illustrative of the position of landlords also in other provinces. As a class they are not at all affluent and their position is distinctly becoming worse with the passage of time. This fact has a very important bearing upon the whole agrarian position and the prospect of changing It for the better.

### LANDLORDS AS A CLASS MUST BE WIPED OUT

The effect of primacy of the landlords upon our land system is depressng in the extreme. The Floud Commission has called the rent-receiving class in Bengal an incubus on the existing agricultural population, which finds no justification in the performance of any material service. What is true of Bengal is also true of Indla as a whole. The landlords at present perform no useful function in our rural economy and there is hardly any chance of their acquiring it in future. They, besides, collecting their rent directly or through their agents, in some cases act as grain merchants and money lenders, but the performance of these functions increases their hold over the cultivators and the degree of exploltation of the latter. By tradition and habit, they are not disposed to make any contribution to agricultural development. They have not the qualities or the mental make-up of the agricultural entrepreneur and are interested only in collecting their rents. But as they are, they have not the incentive or the resources to assume a progressive role in agricultural economy. Lands in their direct occupation are in most cases a small proportion of their entire estate and they too are, like the cultivators' holdings, fragmented and scattered. Large blocks in landlords' occupation are extremely rare exceptions and scientific farming on any considerable scale is as Impracticable for them as for the small cultivators. But in most of the provinces in which the landlords are important, tenancy legislation has conferred statutory rights on the tenant which make him practically proprietor of land subject to the payment of rent at regular intervals. These rights have a seperate market value, are sold, mortgaged, bequeathed and partitioned. In actual practice their exercise has been limited by the relative weakness of the tenants' position and landlords have been able to violate them in varying degrees with Impunity. But as these rights have had statutory sanctions for over eight decades and have been progressively strengthened by the growing awareness of their position on the part of the tenants and by amending legislation, the scope for illegal exactions and practices has decreased and a complicated network of agrarian rights has grown up which is cramping for all concerned, but, nevertheless, secures for the tenants a certain degree of security against the caprice and greed of the landlords. But this also has

<sup>\*</sup>According to the Flond Commission the tent-receiving class was 29 p.c. of the entire agricultural population of Bengal in 1931 and now of course this proportion must be much higher.



The use of new methods in Agriculture is an Important part of Land Policy for lature India Experiments in mechanical agriculture are eleady in progress. We see here the harvesting done by a trector la an Indian India.

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become a very important limiting factor in the exercise of qualities of initiative and enterprise on the part of the landlords. Very few of them are capable of any initiative or enterprize; but even if they were, tenancy legislation has practically made it impossible for them to use their landed estates for increasing the yield or improving the quality of crops. They are now not only by choice but also by necessity reduced to the postion of rentiers pure and simple. It is neither right nor practicable to take away the tenants' right; and landlords have no other afternative except to exercise their right to collect rents within statutory limits and drop practices which are against the law and the growing sense of their rights among the tenants When this position is stabilized, it will be a distinct gain. It will put an end to malpractices to stop which so much legislation has had to be passed but which have continued to thrive because of the landlords' strong position. But the matter cannot rest there. The landlords will lose all initiative including the power to make illicit Income. and their parasitical role become more obvious than ever. They would not be able to do anything for agricultural development or contribute otherwise to the resuscitation of the countryside, unless, of course, few of them develop a social conscience and work for their own abolition as a class. The fact that most of them are small, impecunious rentiers will make it more difficult for them to observe any standstill agreement. The march of events will make their position more and more untenable and Increase the chances of their developing re-actionary tendencies in various forms and shapes. Whatever happens, it is as clear as it can be that landiords have had their day and it is in their interest, and that of the community, that they should get out of their way and do so or have it done for them as painlessly as possible. This is, however, much more easily said than done. Landlords In China, Spain, Italy and South America are fighting for their existence and are, as past and contemporary history shows, prepared to go to any length to maintain their position even when they Poland, Hungary and East Prussia they are at present in the process of being eliminated, but the process is anything but painless and it has taken the experience of countless suffering and this terrible war to get it started. Social euthanasia is still a plous wish of the gradualists. It has never been put into practice because no social class has ever practised self-immolation even when it has lost social utility and is fully aware of the fact.

### URGENT NEED FOR NATIONALISATION OF LAND

Landiords in India are, it is clear, going to fight for their existence, and as they are a very large class, they will not fight in vain There is at present no force to shall many their position or disk

strong enough to challenge their position or dislodge them from it. That a Government Commission has actually recommended nationalization of land and even the conservative Bombay planners have subscribed to this view indicates the trend of thought, but is a poor basis for economic anticipation. The same is true of the demands of academic intellectuals and Left spiinter parties. All these are omens for the future and are naturally disquieting for the landlords. But they do not signify that the thing can be done. Landlords are there, have been there for at least five generations in this country and are not going to let themselves be sacrificed at the altar of the new social order even if it can be proved to the hiit that they are not doing any good to the community. This being the position it is easy to understand why Government plans for the post-war development of agriculture make only a passing reference to the problems of jand-tenures and rely upon multiplication of seeds, rotation of crops, pest control, development of irrigation, anti-erosion measures and marketing schemes for developing agriculture, improving the lot of the agriculturists and increasing the supply of cereals and protective foods for the country. Apart from the fact that the abolition of landlordism is a very controversial Issue and that at a time like this a Government, in the position of Government of India with an extremely uncertain future, cannot possibly entertain a proposal like this, it appears that it would be wise to let sleeping dogs lie for the time being and to concentrate on measures which offend no susceptibilities andcarry with them no risks of social revulsions or convuisions. With so many explosive possibilities already there, it may be practically necessary, even if it is not' ideally desirable, not to disturb the agrarian relations and realise the end of increasing agricultural production and raising the standard of living of the cuitivator by an outflaking manoeuvre. There may be a way of getting around the difficulty even if we cannot remove it by facing It squarely.

thereby put their country in mortal danger. In , the problem in view of the extreme difficulty of solv-

ing it. Landiords cannot exist without collecting rents even though every other function may be taken way from them, as it has aiready been done to a very ge extent. It is not possible to give an estimate of r total income from rent. One very rough attempt is. But this is a speculative figure

e mark. In Bengai and Behar, nounts to about Rs. 21 crores; ANK OF INDIA, LTD. nt in these Provinces and all over ry widely, it cannot be assumed ed on September 7th 1906 the Indian Companies Act VI of 1882 ne of the iandlords is propore cuitivated area of these two al Paid up Rs. 2,96,71,100 al Paid up Rs. 1,48,35,550 ve Fund Rs. 1,78,85,550 ne-fifth of the total cultivated and though one-fifth to oneted area is held by the owner-Heed Office:

income of iandlords cannot be res i.e. five times the income of sses in Bengal and Behar owing ience of rent in the other promuch higher. This means not amount is derived without perive function and is taken from ler-fed cultivators but that the s exercises a very unwhoiesome :al attitude of the agricultural iltural production and land. It I agriculturists to pass on from f the agricultural population to ss, and the more enterprising or ig agriculturists are, as a matter

d to improve their social status eivers instead of working agrimber of rent-receivers is being y social capitarity as by subites. Vertical out produces

sional classes who invest in land to acquire a coveted status and a large number of enterprising agricuiturists who rise from below and join the ranks of rentreceivers have all one desire—to make others work for maintaining their own false pretences. Agricultural development must primarily be a matter of human motives, of social incentives. We have to have a class for whom land and not its rent is the primary concern, who are intent on growing two blades of grass , where one is growing and using all new knowledge and technique for producing this result. This class does not exist at present and will not be created if the agrarian system makes the rentier the top-dog and all the energy and enterprize that there is finds outlet in exploitation of men instead of production from land. This influential class has vested interest in the present dismal state of things and it is against its interest to change it. They will undermine and counteract every effort to build up a class of sturdy, self-respecting, self-reliant manhood in the countryside. They will be against genuine co-operation-i.e. co-operation that is based on the principle of each for all and all for each and produces and fosters mutual aid, self-help and true independence of spirit - disrupt the corporate life of the village and intensify factional fights and feuds, The rentreceiving class is, therefore, not only an enormous drain on the miserable resources of the cultivators but a cause of decay, disruption and exploitation, and regeneration of our rural economy is impossible unless this 'incubus on agricultural population' to use the Floud Commission words again - is shaken off.

cultural production. The old landlords, the profes-

It is, it cannot but be admitted, extremely difficult, up view of one of the machines which will sevolut anise egilculture in India. The nationali-I fend, so necessary for progress, can only be fruitful if it is followed by the employment of tion of food, so necessary for progress, can only be fruitful if it is loli echanical agricultural methods on a large scale throughout the country,

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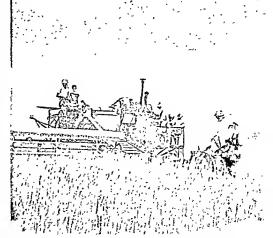
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-moreases exprostation of the cuitivators and, economic incentives operate to create a more widely diffused expioiting mentality and the only way of becoming betteroff is to attain a position by which one can live without working on the iabour of others. Investment and enterprize by which economic position can be improved by raising the standard of cuitivation and increasing agricultural productivity, being rare and impracticable, the whole country side is charged with an unheaithy attitude towards iand and agri-



to bring about what is virtually an agrarian revolution. It is difficult but it is also inescapable. We cannot get round the problem, we have to face it.

The problem is also very urgent. We are living in one world and in many parts of the world it is the most outstanding issue - viz. China, Italy, Hungary, Poland, Spain, Eastern Prussia, many states of South America and it will acquire urgency also in Japan immediately after the war and even in Great Britain. In India, if we are to look fifteen years ahead, its solution will be for us an imperative necessity and the speed with which things will move in other countries will set the pace for us. Our own need is urgent enough, but it will become much more so by the impact of forces emanating from all parts of the world. Modern industrialism has in a large number of countries been imposed on the pre-existing feudal systems. But experience has shown that the combination is unstable and creates unendurable Internal and external stresses. In India, we cannot build up a healthy, progressive and well-balanced economic system without changing the foundations of our agrarian system. We will be drawn, whether we like it or not, into the vortex of world events and they will make it all the more necessary for us to introduce fundamental changes in our agrarian economy,

A change of this magnitude cannot be introduced without the generation of social steam — without a powerful movement that will have sufficient driving power to carry things through and overcome social Inertia and even opposition. But granting that this essential condition is fulfilled, how are we to set about It if downright expropriation is to be ruled out as undesirable and impracticable? It is not possible to work out a scheme for introducing this change in detail in this short essay. But compensation in money, which is multiple of the net rental income, uniess the income is capitalized at current rate of interest, i.e. compensation is thirty three times the net income, will in effect mean partial compensation. and hit particularly the poorer landlords very hard. The Floud Commission proposes to compensate the landlords by giving them 10 to 15 times the net income from land and Mr. M. N. Roy ln his scheme wants to buy them out by paying seven times their net income. The land-values are very much inflated now owing to the inflationary pressure of abnormal currency expansion, but even at pre-war prices compensation at 7 to 15 times the net income would give the landlords much less than their land is worth and the petty iandlords would find it impossible to derive the income which they are receiving now by investing the amount received by them in commercial or industrial undertaking or public securities and will, of course, suffer special hardship. Compensation which is less than the capitalized value of the net income of the landlords will, therefore, be unacceptable to them and a lower rate cannot be justified on any theoretical grounds. Full compensation will, however, involve payment of an amount which will prejudice the chance of the proposition of even being seriously considered and its execution will take such a long time as to make it worthless from the practical standpoint.

MEANS AND METHODS OF CONTROLLING THE RENT-RECEIVING CLASSES

The object of this change should be to make it possible for the rent-receiving classes to change over to productive occupations and cease to be a drag on agricultural and social progress of the country through their functionless existence. The transition to the productive role has to be facilitated by giving time to the present generation to make its exit and to the new generation to grow up to a different conception of their place in economic life and to train themselves for it. This can first be done by the state guaranteeing the landfords their present income from rent subject to their standardization for a period of say twenty five years and also subject to a maximum to be fixed after a period of five years, i.e. to grant the terminable annuities which should, after the transition period of five years, be inversely graduated to the amount of their present income within the upper limit to be fixed at the end of the period. This will enable the smaller landlords to maintain their position for a generation and will enable the bigger landiords to live in comfort in the transitional stage and all of them to prepare themselves for the change without suffering any real hardship. Ultimately, they will, of course, have to carn their living and give up their present position altogether; out they will not be hustled out of it by any drastic action and re-adjustment to the needs of the new situation will be made as painlessly as it is possible under the circumstances. Standardization of rents is necessary because at present there is a wide diversity in the incidence of rents, and rents in some cases are unduly heavy. The state cannot and should not assume responsibility for the payment of unfair rents. The system of inversely graduated terminal annuities will not be readily accepted by the landfords. Public opunion in its favour has to be created and backed up by popular sanctions. There have to be parellel developments in other spheres of economic life, i. e. similar action has to be taken against the persons living on their property income by differential taxation and other measures and an upper limit to incomes in general has to be adopted as a part of the scheme of reconstruction. But even if inverse graduation of terminal annulties for the landlords is regarded as discriminatory and not practical politics, a start can be made by the standardization of rents and the assumption of responsibility by the state for the payment of the net income from standardized rents to all landlords, big and small. The cultivators will, after the Introduction of this change, continue to support the landlord class but will have no contact with them or their agents and be free from their control and interference. The landlords will be a charge on the resources of the agriculturists, but will not be their masters. They will be merely annuitants and the natural course of events will bring into bold relief the lack of social justification for their continuing to be a permanent charge on the community.

The proposal very briefly outlined above is of a very tentative character and will need detailed examination and elaboration in the light of local circumstances in every part of the country. The

necessity, however, of making the rent-receiving class innocuous, reducing their power and removing their influence from our rural economy has to be admitted. Even for the introduction of this moderate measure the social conscience of the community will have to be aroused and made a potent factor in determining the shape of things. This however will only be a beginning of the real change in agricuiture. Important as this step is, it will be only the first step and have to be followed up. It will, really speaking, have only a negative value. It will remove a serious obstacle to progress but will in itself not provide a basis for the growth of healthy, progressive rural economy or bring into play creative forces for sound reorganization of agriculture. For that, positive measures have to be taken and among them the most important for modernization of agriculture has to be enlarging the unit of cultivation. If only the rentreceiving classes are eliminated and otherwise the position remains unchanged, the size of holdings will make it impossible to rationalize agriculture and introduce modern technique. It has to be realised that the problem of holdings - i.e. the problem of uneconomic units of cultivation - cannot be solved merely by their consolidation. Fragmentation of holdings is a serious evil. Division of holdings into several plots increases the inefficiency of cultivation. involves waste and breeds chronic conflict among the cultivators; and if by exchange scattered plots can be combined into compact blocks, it will mean a great improvement upon the existing position. But the compact blocks are in most cases too small to serve as good units of cultivation. Consolidation, in itself. experience has shown, is a slow process and requires a lot of organization and use of persuasion and compulsion in varying degrees. But as consolidated holdings will remain uneconomic after consolidation -i.e. they will be too small to use man power, cattle power and even the present technique to the greatest advantage - it is necessary to work for the wider object which in itself includes consolidation, of enlarging the unit of cultivation by pooling land, cattle and labour and organizing it for joint cultivation, This has to be done without depriving the cultivators of their property-rights. This is important, for it is far too pre-mature to attempt any scheme of wholesale collectivization of land. It would be difficult to introduce joint cultivation without impairing the private rights of cultivators, but this is the only line open to us under the circumstances and has to be adopted. Cultivation will have to be entrusted to a committee of cultivators; and if they get technical help, advice and guidance from the state, which should be made freely available, it would be practicable to combine local knowledge and initiative with central planning. For planned development of agriculture we have to organise the cultivators into corporate units and work through them. The corporate units will not only undertake joint cultivation but also simplify the problem of crop-planning, storing the

produce, grading and marketing it. If millions of cultivators remain isolated, unorganized and absorbed in the problem of their tiny little holdings, very little progress in agriculture can be expected and joint cultivation through committees of their own with the advice and help of experts will enable them not only to enlarge the unit of cultivation but serve as units of action for all schemes of agricultural planning and create conditions favourable to the success of cooperative credit, marketing and organized application of science to agriculture-conditions which are lacking at present. Large-scale farming can be promoted in different forms and local variations will be necessary and desirable, but its introduction is of cardinal importance and has to be made the pivot of schemes of agricultural development.

Rationalization of agriculture through joint cultivation and improvement of technique will make it essential to devise methods for the utilization of surplus agricultural labour. The agricultural labourers to-day are the most depressed section of the depressed industry of agriculture. They form nearly one third of the agricultural population and are suffering grievously from under-employment and unemployment. With re-organization of agriculture this problem, which now exists in a disguised form, will have to be faced in its entirety and nakedness. The amount of surplus labour will considerably increase when agriculture is re-organised and rationalized and has to be provided for. If it is possible to reclaim our 157 millions of cuitivable waste and bring them under cultivation, a part of surplus labour can be settled on the reclaimed land. But it is very doubtful whether there is scope for any considerable extension of cultivation in this country; and if further investigation confirms this view, utilization of surplus labour will raise difficult issues and have to be brought about through development of industries. large and small, and other measures of economic reorganization and development.

Reform of land-system is going to be a stupendous undertaking and it has to be boidly conceived and wisely executed. The days of minor changes like those we have so for concentrated upon are gone Major changes are unavoidable and absolutely necessary. The whole framework of agrarian relations has to be changed; and unless it is changed, technical improvement of agriculture through the application of science will remain subject to serious limitations. But even more important than the application of science is the need for bringing into action the mainsprings of social life, of releasing the dormant force of enthusiasm and earnest endeavour, of giving a new vision and hope to our down-trodden agriculturists. This cannot be done in the existing agrarian economy and that makes it essential to introduce fundamental changes which will make agriculture stand on a sound foundation in a sound economic system.



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Not area by professional survey				512
Area under forests Net area available for cultivation				69
Other cultivated land excluding	cui	rc	nt	89
fallows Area under irrigation		•		94
	٠	٠	٠	209

We find that only 40 8 per cent of the total area is under cultivation and of the 94 million acres, which are shown as uncultivated, only 10 million acres are said to be culturable, which compared with the total area is very necligible. We further discover that the area under irrigation is only 25.8 per cent of the area under crops. If any betterment of agriculture is to come, it is to come not by extending the margin of cultivation in this country where much of the land is of submarginal type, but by extending the irrigation facilities which will require more capital.

slight increase may be possible in some parts and sight increase may be possible in some parts and some more lands may be brought under cultivation by developing irritation and by reclamation and other such improvement schemes, yet, on the whole, the chances of increasing the total area under cultivation to any considerable extent are rather remote.

The other alternative is that the present forms must be exploited more intensively. To do that more capital is required. It has been found that it is countries having the largest investment per unit of labour, not those having the largest farm units, that are the countries with the highest standard critists. This experience is correborated by the farmer statistics which show that the largest profits are standard by the farmers with the largest profits are standard by the farmers with the largest capital equipment in relation to labour and not by the large farmers unit as such. If this is ro, the provision of credit to farmers at a reasonable rate of interest (provided the

credit is well used) will go a long way towards solving the most important problem of low standard of living prevalent amongst our cultivators.

### THE NEED FOR CAPITAL

India is predominantly an agricultural country and if the standard of living of this country is to be increased, the major part of our efforts has to be devoted to agriculture. Various schemes of rural reconstruction in the past have failed miserably because the planners of such schemes had no idea of the extent of capital that was inevitable if any worthwhile results were to be achieved. The mere opening of ventilators, using quinine and mosquito nots, saving a bit of cow-dung and building a little patch of rural road, was no remedy for the chronic ills from which Indian agriculture is suffering.

This shows why the previous schemes of rural reconstruction have failed so miserably. Before discussing the best method to provide credit to agriculture it is necessary to emphasise a few points.

### ADJUSTMENT OF OTHER FACTORS OF PRODUCTION

It must be emphasised here that although more credit is very desirable, nay, very essential for the Indian farmer, no amount of credit alone will remedy the chronic ills of Indian agriculture. After all, credit or capital is only one of the factors needed for productive efficiency, and no single factor would achieve successful results if there is a lack of other factors. Even if every Indian farmer can get all the credit he wants nt n reasonable price, he cannot make the agricultural industry pay, if he has little control over, or cannot adjust himself to, the other factors that govern his life. The Agricultural Tribunal in England in 1924 wrote:—

"Credit alone cannot convert an unprofitable industry into a profitable one. Credit may crable an individual to make a certain operation pay which might not otherwise be undertaken at all and the price which the producer has to pay may just turn the scale towards profit or loss in his own case. Viewed in this way, credit may be an important factor in the cost of production in individual cases, but it is mainly in other directions that a solution must be sought of the difficult problem of how agriculture scenerally can be made to pay".

The weakest link in the organisation of Indian Articulture is the farmer himself, and his management of his lands is often far from estifactory. While scientific management has considerably reduced the cost of production in industry, poor if not

bad management is one of the chief factors in the high cost of farm production. But everything said and done, an adequate doze of credit at reasonable rates of interest will go a long way to help the farmers.

### THE AGENCIES THAT PROVIDE CREDIT TO THE FARMER

An important question now arises as to how the state can best help the farmer in this respect. In order to answer this question, we shall examine the work of the agencies which are at present providing credit to the agriculturist. The two most important agencies which provide short term credit are:—

- (1) The Village money tenders.
- (2) The Co-operative Societies,

The village money lender is the most important agency which provides credit to the farmer. As a

matter of fact, in very large tracts of the country it is probably the only agency. The money lender, from times immemorial has played a great part in the rural economy of this country and has been the main financier of the Indian agricuiture. Although since the beginning of this century some other agencies have come into the field, but he still occupies the most prominent place. The money lender, owing to his somewhat elastic conscience and flexible business methods, has come under a good deal of criticism during the present century, and unfortunately most of this criticism is valid. His credit has supported the farmer as the rope supports the hanged. He has helped the farmer but the price that the farmer has to pay for his help has been altogether out of any reasonable proportion to the heip rendered. His rates of interest. even considering the high risks that are involved in his business, are far too high-the rate which even the most prosperous industry in the world can hardly afford to pay. The result of his financing has been that, aithough he has heiped the farmers in times of difficuities, he has exploited them very excessively. We find that while the agriculturist has been suffering the money iender has been thriving. Sir Malcolm Lloyal Darling, who has made a thorough study of the agriculture in the Puniab, in his classic book "The Punjab Peasants in Prosperity and Debt", observes that the largest number of income-tax payers in the Punjab belongs to the moneylending class and in practically almost all the villages the best house is that of the money lender.

### THE CO-OPERATIVE SOCIETIES

In order to provide the farmer with credit at reasonable rates of interest and to save the peasants from the clutches of the money lender, the Co-operative movement, in British India, was started by Lord Curzon in 1904. This movement began with very high hopes and very lotty ideals. The forty years' working of this movement shows very pathetic and poor results. The total number of co-operative societies in India in 1943 was 1,46,160, which gives us 42.2 societies per one lakh of inhabitants. The total number of members of these societies was 69 lakhs, which in other words means that out of 1,000 persons only 19,9 were members of the co-operative societies. The total working capital of these

The sich barrents which fadee reaps every year will not better the lot of the peasants, unless they are colieved of their long and heavy debta. The organization of agricultural lineace would help them conjoy the beachts of their padeous bloom to the fields.

Patts by 0.6. Foreign



societies was 121 crores, which means that the capital per head of the population was only Rs. 3-8-0. The co-operative movement in India has progressively deterlorated and has failed to solve the credit needs of the country. It provides a very insignificant part of the total credit requirements of the farmer. There is no doubt that co-operation, if properly worked, is a sovereign remedy, but, considering the economic backwardness of the country, I believe that cooperation is hardly going to help us in the solution of the credit problem. I believe provision of credit is the least suitable field for co-operation, although co-operation is eminently suited for various other fields, such as co-operative marketing, consumers' stores, etc. Therefore, in the field of credit, we have to explore the other alternatives. Even it we take credit out of the purview of co-operation, there are other big fields for co-operation to work, and all energies of this movement should be diverted to these other fields.

### THE MONEY LENDER

The other agency as we have already mentioned is the money lender. It is a very important agency, but we all know its defects and weaknesses But, in view of the fact that no other suitable alternative is possible, we have to reform this agency and make the best use of it.

The money lender is a hereditary professional financier who has been doing this business from times immemorial He knows his job very thoroughly. His management is very cheap He knows his clients fairly well and can accommodate them effectively and immediately He knows the credit-worthiness of almost every farmer in his area and the character of his clients; therefore, he is well equipped to deal with them. He knows when his debtors are unable to pay their loans owing to no fault of their own, and he can realize best when to give extension in genuine cases. All these points are to his credit. His defects are too well known to be resterated here. Efforts have been made in almost all provinces to check these abuses by various enactments. To my mind, one draw-back of these enactments has been that although they have rightly penalised the dishonest money lender, they have made no provision for the recovery of loans for the honest money lender. This is not just. If dishonest money lenders are to be penalised, the honest money lender must be properly rewarded.

In British India, in order to develop the bill market and to provide credit facilities to the agriculturist, it has been felt that the indigenous banker must be lined up with the Reserve Bank. The Reserve Bank has made several efforts to achieve this end, but has falled because, although it has Imposed several restrictions on the business of money lenders, It has failed to attract them by providing them with adequate facilities to get themselves linked with the Reserve Bank. I believe in thoroughly penalising the dishonest money lenders, but at the same time, I do believe that the homest money lenders, and in this country there is no lack of them, have not been fairly treated and have not been given

proper facilities for the recovery of their loans. I suggest that the services of such honest money jenders must be utllised for the provision of credit to the farmer and their activities should be properly controlled. With this end in view. I suggest, that we should select a unit of 10 villages and set up "Short Term Credit Organisatons" for each unit. This organisation should have a monopoly of its business in the unit. This is essential in order to control the borrowing of the farmer and to keep his debts within his repaying capacity. He should be assured that he will be able to get adequate credit for his legitimate needs. but at the same time he should be prevented from over-borrowing from too many agencies without the one knowing the losses of the others This end can best be achieved if he borrows from one agency only, No other agency (except the agencies we shall mention shortly) should be allowed to lend money in this area. Of course, there will be no statutory prohibition for the lending of money if some people want to do it at their own risk or want to provide funds for their friends and relatives at their own risk. The credit limit of each borrower in this area should be properly appraised and fixed by a local board and the farmer should possess a right to demand loan to the extent of this limit and it should be the duty of this agency to accommodate him to this extent. The joans should not exceed a period of one year or at the most 18 months and should be regularly repaid at each harvest. The agency must be assured by the Government that there will be no difficulty in collecting its debts.

A special simple act should be passed by the Government authorising the establishment of Sahukar banks in the rural areas. This should be the new agency to provide credit. The paid up capital of each bank should be Rs. 1 lakh. The money lenders of the areas should have prior rights to subscribe to the shares of such banks. The managing agency of such banks should be given to the local Sahukars and they should be allowed to run these banks. It should be necessary for the managing agents to subscribe 25 per cent of the shares themselves, and another 25 per cent should be sold by them. The Government in each bank may purchase the remaining 50 per cent of shares if they find that these shares do not find a market in the unit area. Shares must be sold, within each unit area. These banks should be allowed to accept deposits, and be allowed to do the other business which the money lender is doing at present. It is no use insisting that the indigenous banker should confine himself to the banking business proper, as demanded by the Reserve Bank, because that is not practicable and the impracticableness explains why there has been no response to the scheme of the Reserve Bank. It must be understood that the ordinary hanking principles cannot apply to these Sahukar banks. These must remain as glorified money lenders, doing all that the money lender was doing, with the only difference that while the money lender's business was entirely uncontrolled, the business of new banks will be properly controlled. The borrowing and lending rates should be controlled by the Government.

The marketing conditions in rural areas are primitive. There are no storage facilities and the Government are realising this now as they are finding great difficulty in storing food grains collected by them. It has been estimated that the loss due to lack of proper storage is in the neighbourhood of 10 to 20 per cent. Therefore, I regard it as essential that In the headquarters of each unit there should be a properly built godown. I estimate the cost of such a godown at Rs 10,000/-. I suggest that half the cost should be provided in building these godowns by the Sahukar bank and the remaining half should be given by the Government as a free subsidy. The Government should provide credit to the farmers on the security of the produce stored in these warehouses and the Reserve Bank should discount their paper up to 10 times their capital. This means that each bank with a capital of Rs. 1 lakh should be able to provide credit to the extent of Rs. 10 lakhs. These banks should also be able to get accommodation from the branches of the State Bank which should be opened in every Taluka. The scheme of starting State Banks for the provision of credit purposes is discussed in another Section.

The second agency to provide credit to the farmer in this village area should be the co-operative society. Contrary to all the expert opinion in the country, I venture to suggest, that the loans provided by these co-operative societies should only be for unproductive purposes, and free of interest.

I hope I shall not be accused of heresy when i suggest, perhaps for the first time in this country, that the function of the co-operative credit societies in India should be to provide credit only for unproductive purposes. I not only maintain that co-operative societies should provide credit for unproductive purposes, but also the credit provided by them should be free of interest. This is really a very unorthodox and bold statement to make, but I am fully convinced about this and I am prepared to defend it.

Those who live in the world of ordinary human beings and know the economic conditions of our masses, the social structure of our society, the high death-rate and the high birth-rate prevalent not only amongst human beings, but also amongst cattle, the universal system of marriage and the prevalence of a large unmber of diseases, know It for certain that credit is needed by the ryot for various purposes, which, by no stretch of Imagination, can be called productive. The various engulries held about the causes of Indebtedness in this country show that three-fourths of the money borrowed by the cultivators is for unproductive purposes. We cannot be blind to the facts of the situation and cannot dismiss this important problem by just saying that farmers should not borrow for unproductive purposes. This simply is not possible. It will take a large span of years before the social structure of our society changes to any considerable degree, so that such loans become unnecessary. In the meantime, as things are, loans have to be incurred and there must be some organisation to cater for these requirements.

Naturally, the State Banks cannot undertake this aspect of business. They will be purely hanking institutions and should provide credit on business lines. At the same time, we cannot deny the need for an institution to cater for the unproductive requirements of the farmers. These are likely to remain there and demand the existence of some institution to fuifil these requirements. The co-operative societies in the beginning, in their enthusiasm, refused to face the facts, and the result was that, in spite of their efforts, the banla thrived, because he offered himself to cater for these fundamental requirements. I personally believe that these requirements are very important. The structure of our society is such that large sums of expenditure have to be incurred in connection with marriages and such other social functions. In the ordinary course of things, a farmer should be wise enough to make provision long ahead for this purpose, but we know him as he is. Some one must, therefore, help him at the time of his need,

In the so-called less advanced days, these functions were performed by the Baraderles (caste relations). The custom was that, at the time of marrlage, it was usual to give loans in the form of cash, Regular account of these loans was kept. The parents of the bride or bridegroom used to get considerable amount of money from these present loans, and a major part of the marriage expenses was met from these loans. These loans were repaid at the time of other marriages and were always free of interest.

It is unfortunate that this very useful custom is fast disappearing, while no other institution has taken its place. I personally think that a co-operative society is the right institution to take the place of this useful custom.

Amongst the women of the Punjab, there exist a peculiar type of thrift societies which are called "committees". The "committee" is formed by women who know each other and they subscribe regularly every month and the total collection each month is given to the most needy member. If the number of needy members is more than one, then the decision takes place by way of lottery withdrawal. This system has been working very well. These loans are free of inteerst. There are counterparts of this system practically all over the country.

It was a very wrong notion, whereby it was This fact has been fully exposed by Lord Keynes In his book, "General Theory of Interest Money" and employment. The rate of interest in rural areas is hardly an eocouragement to save and, if moneys are loaned on interest, they prove a great burden for the borrowers, as they impose serious drain on their meagre resources. I suggest, therefore, that all the co-operative societies in the villages should attract deposits and should lend to the needy members for these unproductive purposes free of interest. It will be only in such a society that the well-to-do members would be able to exercise their influence on the borrowing members and would control such borrowing

effectively. This, in my opinion, is real co-operation; otherwise, there is no difference between money lenders' loans and those of the co-operative society, 1 earnestly hope that these suggestions will receive serious consideration in the country.

### LONG-TERM CREDIT FOR AGRICULTURE

Long term credit has been generally defined as a credit extended for a period of five to forty years or more. But in India the period is seldom more than twenty years. The raising of long term credit for the financing of agriculture has been a peculiarly difficult problem. It is in relation to this form of credit that the nature of the agricultural industry has to be specially considered. Agriculture is fundamentaliv an Individualistic Industry, and is carried on by a vast number of farmers who are scattered over a wide area; on the other hand (with minor exceptions), modern industry is highly localized. and is run on a corporative basis. In order to finance industry, money can be raised without any serious difficulty if the promotor can inspire confidence in the public. The usual method is to issue bonds. But a farmer, being an Individual, has to mortgage his farm in order to borrow money.

The following are the principal agencies which supply long term credit to the farmer.

### AGENCIES SUPPLYING LONG-TERM CREDIT

- (t) Privnte individuals.
- (2) Money-Lenders,
- (3) Co-operative Credit Societies.
- (4) Government Loans.
- (5) Land Morigage Banks.

The credit provided by the Government in the form of Taccavi loans is hardly more than Rupees five lakhs a year.

Leaving aside the money lenders and private lenders, the main agency which provides long term credit to the farmer is co-operative Land Mortgage Banks. The first co-operative Land Mortgage Bank was started in the Punjab in 1921. The following table gives the figures for those provinces and states where the banks are said to be most successful. The figures are for 1941-42.

Province or State	Total working capital	Debertures found sirce inception.	Debeutures out- standing at the end of the year
	Lakhe	I,nklis	Laths
Madras	259 93	359,97	273,95
Bombay	31.93	3100	30.00
C. P. & Bernt	14.55	15 00	15.00
Mysore	15 75	16.43	15.11
Daroda	6.6%	5.00	500
Cochin	17.86	15 00	15 00

For those provinces and States, where the coful, the total debentures Issued so far on their working capital is less than 4½ crores of rupees. With the possible exception of Madras, all other land mortgage banks are mere nonentities. What are the credit needs of the country which has a population of 400 mittion souls of which at least 70 per cent depend on land for their living can be imagined. I may also mention that the rural indebtedness of the country was estimated by Sir M. L. Darling at 900 crores in 1829. My own estimate for the year 1936 was somewhat near Rs. 1,200 crores.

### CO-OPERATIVE LAND MORTGAGE BANKS A MISNOMER

It has been my bellef throughout that it is a misnomer to call these mortgage banks co-operative. The only thing co-operative about them is that these are registered under the co-operative societies, act, and the Registrar of the Co-operative Societies, exercises some hold on them in one form or the other. In these observations, I am supported by a very able Indian economist Mr. Manu Subedar, who in the Minority Report of the Central Banking Enquiry Committee observes as follows:—

"I have taken some pains to enquire into the extent and the manner, in which the principle of co-operative credit is to be established in the case of land mortgage banks. For one thing, there is no unlimited liability in this case and the borrowers do not, therefore, in any sense guarantee the debts of each other. The co-operative part then came in the sense that the borrower would be, also n shareholder. It is fullle to attempt a combination of the function of saving and borrowing at the same time. The money for the shares becomes merely a deduction from the loan.

"They represent an arbitrary deduction from the loan, and must be regarded by the borrower in the nature of a higher rate charged to him."

STATE BANKS

My suggestions for long term credit are that the Government in each province should open State Banks in order to mobilise the savings of the people and to provide credit to the farmers, house builders and to industrialists at reasonable rates of interest. The detaits of this scheme were published by me six years ago in my book on State Banks for India. In mainly relied on the experience of British Dominions and the U. S. A.

Str Frank Noyce, in the London Economic Journal pertinently observes: "I have entirely overlooked the differences between the economic conditions of the large scale farmers of the advanced countries that I visited (viz. Australia, New Zealand, Canada, South Africa and the United States of America) with their high standard of living and those of the millions of India's poverty stricken peasants."

Prof. P. J. Thomas in his review in the "Times of Indta" observes, "the conditions in the countries just mentioned differ very fundamentally from those in India. In nearly all the British Dominions, agriculture is pursued on a large scale by substantial farmers, and what is good for them may not be suitable for the poor peasants who earry on mostly subsistence farming in India."

In view of the fact that in support of my plea for establishing State Banks in India, I have given the example of some highly rich countries where farming is practised on a fairly large scnie, it is considered that what is useful for these countries may not prove of equal value in a country like India where farming is more a mode of living than a business and the average size of holding is very small.

These objections have considerable force unless it is shown that countries with economic conditions more anniogous to India than the rich British Dominions have established State Banks and have derived some benefit from them.

At the time of the writing of my book, I was not in a position to give first-hand information of State Banks in countries comparable to India. Fortunately in March 1939, I had the privilege of Joining the Financial and Economic Section of the League of Nations to collaborate in the study of Agricultural Credit in Europe and I travelled extensively in several European countries, especially France, Italy, Austria, Hungary, Yugoslavia and Bulgaria. In the course of an article, it is not possible for me to quote numerous illustrations, but. In support of my thesis, I shall mention the State Bank of Bulgaria which is known there as the Agricultural and Co-operative Bank of Bulgaria.

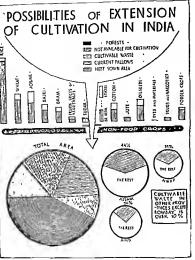
I have especially chosen Bulgaria because in many important respects the analogy between India and Bulgaria is very striking.

Bulgaria, like India, even slightly more, is predominantly an agricultural country where 81 per cent of the total population depend on agriculture for their livelihood.

The State Bank of Bulgaria is the biggest of its known to evidend in the whole of Europe. The Bank has a capital of over 9 million levas, the entire amount of which is provided by the Bulgarian Government. The total oworking capital of the Bank exceeds 10,465 million levas. In addition to these funds, the Bulgarian Government has entrusted the Bank with nearly 6 million levas which it distributes on behalf of the Government for special purposes, such as loans to refugees, eereal monopoly etc. For the disbursement of these loans, the Bank acts as an agent of the Government. Unlike India, the Bulgarian State has

realised that it is much better to distribute State aid through a Bank, than through a civil department of the Government. The Bank has 193 regular branches and 94 ngencies for a population of six million people.

I suggest that in India each province and important Indian State should start a State Bank with three departments. There should be one general banking department. It should do all the work that most of the Joint Stock Banks are doing. But its main aim should be to mobilise the savings of the country which shall be badly needed for the post-war development. In order to create a savings habit the State Bank should launch a sayings drive, and in order to inspire confidence these savings must be guaranteed by the State. It should have a housing ioan department which should provide credit for the building of houses. Good housing is the most erying need of this country and requires special consideration in the post-war period. A Credit Foncier Department which should provide long term credit both to farmers and industrialists by the issuing of bonds which should be guaranteed by the State should also be opened in the State Bank. The Credit Foncier Department will take the place of land mortgage banks. Quite contrary to the generally accepted principles, I have suggested only one single coordinated bank for these three purposes. There ought to be no objection to this, if we mention that the funds of all the departments should be kept separate. The experience in Australia and U.S.A. has shown that such unified administration of banks catering for all requirements under one roof is both more economical and effective. There should be one main agency to cater for all the necessary requirements. In the villages, it should be the Sahukar Bank. The farmer should keep his deposits with this bank, which on the banking principles should be kept strictly confidential. One of the most fundamental defects in the primary co-operative societies is that, in practice, no secrecy is kept about deposits. People naturally do not want (not even in the Indian villages) that their financial resources should be known to everybody; hence those who have money are very reluctant to deposit it with the primary societies. The Sahukar Banks in the villages should act as agencies for the State Bank for the provision of long-term credit to be taken from the taluka branches of the State Bank. All npplications for long-term loans should go through the Unit Sahukar Bank. Thus we shall have a ready effective system of rural finance catering for nll the requirements of the farmers nt reasonable rates of interest, keeping the free initiative, but controlled and supervised



Scole &C M.=# million ocros

supplementary foods is available. In their absence the quantity of cereals needed per unit would be much more than 18 oz per day and the shortage in the production of cereals would, therefore, be much more pronounced.

### PULSES

The production of pulses is 8.5 million tons but only 7.5 million tons will be available for food consumption, allowing all the deductions as in the case of cereals. The mutritional requirements of the country at 3 oz. per day per unit come to about 9 million tons. An increase of 20 per cent in the production of pulses is, therefore, called for.

### VEGETABLES

The production of vegetables is estimated to be 9 million tons, which gives only 3 oz. per day per unit. The minimum requirements are considered to be 6 oz. according to the nutritionists. Hence the production of vegetables needs to be doubled.

### FATS AND OILS

The production of fats and oils-is only-1.9 million tons which gives 0.6 oz. per unit per day as against a minimum requirement of 1.5 oz. In other words, their production is to be increased by 250 per cent.

The total requirements for food purposes and the amounts available are set forth in the table below:—

•	Ounce's per day a consumptio		Total quantities in million tons.		
	Required for a balanced diet.	Available.	Required for a balanced diet.	Available.	
Cereals	18	17.5	54.0	52.5	
Pulses	3	2.5	9.0	7.5	
Sugar	2	1.8	6.0	5.3	
Vegetables	6	30	180	9.0	
Fruits	2	2.0	6.0	6.0	
Fats & Oil:	1.5	06	4.5	1.9	
Whole Mill	. 8	1.5	32.0	63	
	Per	capita_	Per cap	oita	
Butter milk		3.0		12.5	
Meat, Egg,	Fish 2 to 3	0.5	6 to 9	1.5	

Note: Although dictions will never support a one-sided unbalanced dict it may be nateful to work out how much additional cereals and muliets will be required to provide the minimum catorine requirements in tracts, where the population is vegetarian and will, therefore, not include meat, fash and other animals products in their dict.

The net result is, however, clear; a considerable increase in agricultural production in India is called for in order to meet even the minimum food requirements of the people.

### INCREASE IN AGRICULTURAL PRODUCTION

Increase in agricultural production can be secured in two ways: (i) by bringing more land under cultivation and/or(ii) by more intensive cultivation.

The published acreage statistics show that the total area of India is 1,000 million acres, of which British India occupies only 512 million acres. The remaining 490 million acres are comprised in the Indian States. The position that emerges in respect of the acreage is somewhat as follows:—

	In Million Acres.						
	British	Reporting States.	Total for cols. 2 & 3	Estimates for non- reporting States	Estimates for all States.	Estimates for All India.	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	
Land under forest Land not available for cultivation Culturable waste Current fallows Cultivated land	93 92	19 23 19 14 68	87 121 111 59 282	20 160 60 20 80	39 188 79 34 148	281 171 79 362	
Total	512	148	660	340	488	1,000	

### EXTENSIVE CULTIVATION

From the above table it can be seen that the call area of culturable waste land in India is 171 million acres in addition to another 79 million acres kept as fallows. The possibilities of bringing some of these areas under cultivation are still under discussion but prospects are not very hopeful.

### INTENSIVE CULTIVATION

The other way is increasing the productivity of the soil by better cultural practices, by using better seeds, by using more manures, by exploiting irrigational facilities, etc. Recently a note has been published on "The Technological Possibilities of Agricultural Development in India", by Dr. Burns, Therein he has estimated potentialities of different crops based on the present scientific experiments and researches.

### POTENTIALITIES: Cereals

... The production of cereals - rice, wheat, barley, jowar and bajra and maize and other foodgrains can be increased by 15 per cent within the next ten years and it will be sufficient to meet the minimum requirements of the population. In the case of puises. he expects 20 per cent increase which will also be sufficient to meet the minimum demand from the present acreage. The production of vegetables needs to be increased by 100 per cent and that of fats and oils by 250 per cent. Though much better yields are expected after, say, ten or fifteen years, more area must be put under food crops to meet for the present the minimum requirements of the people. As the possibilities of extending the area are very limited in the immediate future, the only way is to release certain acreage under crops, other than foodcrops, without at the same time affecting the purchasing power or standard of living of the cultivators of cash crops.

### SUBSTITUTION OF INFERIOR CEREALS AND CHANGE IN DIFFETIC HABITS

Here a passing reference is needed to the tendency of substitution of inferior cereals for more nutritious cereais. This is due to poverty and recurring droughts. In future crop planning a check to this tendency is necessary. Secondly, dietetic habits of people in certain regions must be changed from the nutritional point of view. The preponderance of rice in Eastern and Southern Indian diet should be reduced and a mixed diet composed of wheat, rice, bariey, maize or ragi, which is bound to be more balanced should be introduced. The percentage of puises, which contain more proteins, should be increased in the diets of the people and their digestibiilty increased by iess use of polished rice and more use of vegetables and potatoes. Studies in the nutritive quality of crops are, however, just beginning in India, but these should ultimately guide agricultural practice, ensuring at once the combination of high vield with improved nutritive value of food-crops. A systematic crop and food planning must be done, taking into consideration the dual need of producing heavy yielding and energy producing crops and supplementing them by the accessory food products necessary for health and efficiency in the areas of population pressure. It is in these areas that food tends to be inadequate or unbalanced; and planned crop production may offset food deficiency and help to improve diet and health conditions and distribute the labour of peasant families to better advantage throughout the year.

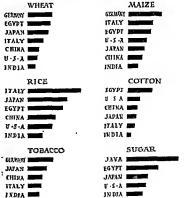
From the nutritional point of view, it has been calculated that 8 oz. of whole milk are required per capita per diem, for a balanced diet. The minimum requirements of milk for the population total 32 million tons. The actual production has been estimated at 23 million tons. After allowing for 10 percent of the production for feeding calves, 20.7 million tons are left for human use. Only 27 per cent of this i.e. 5.6 million tons are consumed as fluid milk. The greater part of the remainder is converted into ghee and the amount of butter milk avaliable may be reckoned at 12 million tons. If the consumption of whole milk is increased to half the total production. instead of only 27 per cent as at present, it will be necessary to increase production three-fold in order to supply 32 million tons of whole milk annually.

Livestock Production in British India

	No. of mileh cattle.	Milking capacity in 1b, per head per aunum.	Total anuual suilk pro- duction in thousand lbs.	****	Milk pro duction per head of human population
Cows	 37,273,195	484	18,036,387	255,777,632	3.09
She buffaloes	 15,045,836	1,216	18,296,461	255,777,632	3.12
Gosts	 37,686,059	200	1,133,936	255,777,632	0 20
Total	 		37,466,784	255,777,632	6.42

India has 200 million cattle to support.

## COMPARATIVE STUDY OF YIELD PERACRE OF INDIAN CROPS WITH THAT OF OTHER COUNTRIES



Scale 2" - 300 lbs. in cose-of Wheel, Rice, Tabacca & Moose. 1" = 5,000 lbs. in case of Sugar, 2" = 50 lbs. in case of Cotton.

U-SA

Fifty nine

Fifly nine

### FODDER CROPS AND MILK REQUIREMENTS OF THE COUNTRY

Professors Watson and More in their weil-known treatise on the Science and Practice of British Farming', state that for cattle the accepted figure for the maintenance is 6 ib. starch equivalent per 1.000 lb, live weight per day and 0.06 lb, of protein daily equivalent per 100 lb. ilve weight. Dr. Burns in his 'Note on Agricultural Development in India' states that the average live weight of cattle varies from 500 to 700 lb. in various regions of British India and that In terms of dry matter the dally requirements per head will be 11.5 to 16 lb.

The statistical position of fodder production in British India is as follows:-

Area under special fodder crops	•••	10,543,482 acres.
<ul> <li>Total Roughages produced per year (including fodder crops, grasses and straws of grains)</li> </ul>		174.47 million tons.
-Roughages available per head per day in lb. dry		10 lb.
<ul> <li>Total concentrates (viz. cakes, sceds, bran and pollard)</li> </ul>		3.729 million tons.
-Concentrates available per bead per day		0.21 lb.
-Rstimated annual quantity :		
(a) Roughages(b) Concentrates		224 162 million tons. 12.795 million tons.
-Deficiency per year		
(a) Roughages		49.762 million tons. 9.066 million tons
<ul> <li>Deficiency ratio of quantities available to quantities required</li> </ul>		

The mliking capacity of milch cattle in India is very low, because they live under adverse conditions of climate, feeding and management. Such experimental work as has been done on a limited scale indicates that the milking capacity of a higher order is latent in them and can be developed by application of scientific methods in four directions, viz. feeding, breeding, management and disease control.

78.53 •••

29.14 ...

Concentrates ......

Feeding Is the most important of these Items and is a factor which can be used to produce an immediate increase in milk production. Even a cursory glance at the statement regarding fodder will show that feeding is hopelessly inadequate. It has been observed that the ordinary village cows will produce 50 per cent more mllk per head if they are maintained on an adequate ration. An immediate increase of 30 per cent can be expected by better feeding, Dr. Burns expects, in addition, 15 per cent from breeding, 15 per cent from management and 15 per cent from disease control.

### Potentialities of each species of In estock :

	Y	ot	Isrtas	ities	of	meresse	expressed as	
Species	8	P	ercent	age	of	present	production:	
ows (milk)		:		٠.		75	F	
attle (working efficiency).		•				60		
Suffalows (milk)		٠	•	•		60		
ioats (milk)		٠	•			50		

Increase in the production of cereal crops will automatically increase the amount of straw available. The area under grassiands can be made to yield better results by a proper system of grassland Sliage making will neutralise the management. effects of seasonal deficiencies and gluts. Supply of Concentrates can be increased if we crush oilseeds at home instead of exporting them and if we use oilcakes as manure.

Along with this, a boid cattle policy is necessary. Religious sentiments are coming in the way of reduction in the number of cattle. We need a reduction in the number of cattle stock in Indla, as the large percentage of them is absolutely redundant. We should adopt methods like castration of unselected breeds etc. We should begin to batter on both the fronts.

### CASH CROPS: Cotton

Cotton is India's chief cash crop. The maximum area under cotton was 17.7 million acres in 1925-26 and the minimum 112 million acres in 1915-16, the average for the period 1911-12 to 1942-43 being 14.4 millon acres. The latest figures for production available are as follows:-

Long staple—over 1 Inch Medium staple—A-1 inch Medium staple—B-18" to 31/32" Short staple—A-11/16" to 27/32" Short staple—A-19/15" to 21/32" Short staple—C-17/32" and below	108,000 bales. 249,000 bales. 1,888,000 bales. 1,106,000 bales. 1,425,000 bales. 1,305,000 bales.

Total ...

6,081,000 bales.

Our cotton production is mainly that of short staple cotton. We export nearly 60 per cent of our production, the chief consumer being Japan and some Continental countries. We have to import also cotton of long staple varieties worth on an average 25 crores. The history of cotton during the last twenty years shows a very gloomy future for our cotton growers. Japan's post-war position we can anticipate exactly now; so also the economic positions of the Continental countries. Exchange difficulties and depression in industries might crop up again. U.S.A., our greatest competitor in the international cotton market, is thinking in terms of subsidising cotton exports as she did in the past. Our production being mainly of coarse short staple varieties, we have no chance in the international cotton market against U.S.A. The only way and the best way is to adopt the policy of reduction in the area under cotton. We have at the same time suggested equally remunerative substitute crops to the cultivators. Introduction of long-staple varieties is also necessary, as thereby we can curtall our imports. The production of cotton per acre in India is 80 to 100 lbs. This yield is very low as compared with the yields in U.S.A. and Egypt. Efforts in that direction are also necessary. We should plan to have the same output from a lesser area and that too of long staple varieties.

Jute is the second Important cash crop of Indla. of which we have practically the monopoly. It appears

that both production and export have reached saturation points for the present at least and until new uses are forthcoming any expansion in the world market in jute cannot be hoped for. The Jute Enquiry Committee recommended long ago the voluntary restriction of jute cuitivation and suggested that the land set free by restricting fute cultivation could be most profitably utilised in the cultivation of rice, sugarcane and finer varieties of tobacco. The Committee found jute meeting with competition which is developed along two main lines, viz. firstly a progressive elimination of jute sacks as containers for grain in transit owing to increased adoption of buik handling: secondly, substitution of jute by paper and to a less extent by cotton for the making of bags. The danger seems real and the remedy lies in putting forth every effort to retain trade which the industry now holds; and in initiating and vigorously pursuing a policy of research with the object of discovering fresh markets and new uses for jute. Better varieties should be introduced and manuring should be propagated. Thus we can reduce large areas under jute and transfer them to some other foodcrops. It is estimated by Dr. Burns that the yield can be increased very easily to 20 mds, per acre and it would require 2,250,000 acres to obtain the last year's yield of 9,000,000 bales as against the actual acreage required which was 3,300,000 acres.

Tobacco

India is actually the largest producer of tobacco In the world (the figures in 1935-36 were 1.543 million lbs., being 24.1 per cent of the total world production of 6,393 million lbs.). Indla, however, is very far from capturing a proportional share of the tobacco industry. The actual Indian export in 1935 was only 27 million lbs. or about 2% of the previous year's crop of 13 million lbs. India, on the other hand, imports 4 to 5 million lbs. of unmanufactured tobacco and foreign cigarettes amounting to 0.6 to one million lbs. valued at 19 to 33 lakhs of rupees. The imports are mainly of the Virginian tobacco. Tobacco in the past was almost entirely grown for use in bidls, in the hooka, for chewing and for snuff; the modern development is the growing of tobacco for use ln cigarettes. The demand for tobacco for the hooka, chewing and snuff may probably continue much as it is, but it is likely that the demand for bidi tobacco will be affected by the growing habit of smoking cigarettes. There are some half a dozen varieties, mostly of American origin, now under test and one or two of these are being widely grown. The amount of cigarette tobacco produced in this country in 1940-41, for which we have figures, is 99,841,000 lbs. It may be taken that this tobacco was produced from 110,188 acres estimating an yield of 906 lbs. per acre. Attempts should be made to try out a group of cigarette tobacco varieties in various provinces. The . cigarette leaf must be cured in flue-curing barns. Flue-curing is an art requiring both intelligence and practice. Training of five-curers is, therefore, essential. Given these conditions we may look forward to a total acreage under eigarette tobacco of 200,000 acres which should give us annually 150 million lbs. of good flue-cured tobacco. As for tobacco for other

purposes, I suggest that for the moment they be left alone and when the cigarette tobacco business is on a sound footing, we may turn our attention to them.

### Sugarcane

Abart from Cuba. India with her 3,4 million acres (1942-43 figure for British Indla only) under sugarcane is the largest producer of sugar in the world. The area has Increased from 2.9 million acres in 1931-32 before the grant of protection to 3.4 million acres in 1942-43. India now produces nearly 6 million tons of sugar, which is much more than twice as much as Java, her competitor in the home market. The imports of sugarcane have decreased from about a million tons in 1930-31 to only 223,000 in 1934-35. India's yield of sugarcane per acre, however, still remains very low; and only half the acreage is under improved varieties. The location of the Indian sugar industry is also peculiar. In the Tropical India. where cane suitable for the factories can be grown. cane cuitivation at present is unimportant. Outside the Tropics, Indla's cane area is concentrated, 75% of the area being found in the Indo-Gangetic plain, to the north of the Tropic of Cancer. Here cane has a very iong dry season and therefore the yields are very low. In U.P. and Bihar the yields are generally 15 tons per acre whereas in the Bombay Deccan they are 40-50 tons in dry areas and 70-80 in irrigated tracts. Our sugar deficiency is only of a million tons. We should concentrate on irrigation areas in the Tropics and popularise Improved varleties, especially co-varieties, and thus improve our production and sugar supply. We shall have, no doubt, to give due attention to sugar industry in the different provinces In order to avoid Inter-provincial rivalries. Thus, with the present acreage under sugarcane, we can improve our sugar supply very well and need not worry about Imports from other countries and can be seifsufficient.

### Oilseeds

In the whole of India oilseeds represent a valuable crop in the dry season and an important item in rural economy. Linseed, rapeseed, sesame, and groundnuts could be greatly expanded in output and thus help to meet the increased food demands of the growing population and establish the manufacture of oils and fats, which have important industrial uses, on a sound footing. We have seen that in the case of our human population, supply of oils and fats must be increased by 250 per cent. In the case of our cattle population, we have seen that the supply of concentrates is very deficient and must be increased by 10 million tons approximately.

For many years, over 20 per cent of India's total system and in value, consisted of oilseeds, after all the home demands were met; and in quality or quantity or both, India is supreme with half the world's supply of sesame and groundnuts, a third of its cotton, two-thirds of its rape and mustard and one eighth of its linseed, the best of its coccoanut and 100 per cent of its castor. In some cases, the cotton seed for instance, improved varieties would greatly increase the yield of seeds, though the

peasant's need for oil aiready makes him prefer a variety that yields more seed than fibre.

Owing to the population increase there has, however, been no increase in production of the four principal oilseeds during the last thirty years. In fact the tendency is towards decrease. Similarly, exports have failen. In the case of inseed, exports have tended upwards in recent years, assisted as they have been by the Ottawa Preference granted to India by the United Kingdom. Similarly, the production and exports of groundnuts have also increased considerably.

With heavier population in India it will be uneconomical to grow more oilseeds for exporting them either raw or in the form of oilcakes, as this would mean a serious drain of nitrogen. On the other hand, with formidable rivais like the Argentine in the supply of Inseed, China in the production of sesame and Rumania in the supply of rapeseed, with the difficulty of supplying uniform and reliable products for the European industries and with applied chemistry constantly discovering new substitutes for old products, it would be on the whole advantageous to develop a jarge indigenous oil-crushing industry in the country. The cake would mostly be used up in the fleids and consumed by the cattle, while vegetable oils and fats would support the growing soap manufacture and other industries in the country.

There is a considerable consumption of vegetable ools in India and the internal demand will increase with increase and expectable in india increase in increase with increase and vegetable fats. India imports approximately 300,000 cwt. of soaps and vegetable ghee and fats etc. worth one crore rupees approximately, every year. Factories must be started anew, and the present ones, given encouragement, which may render vegetable oils and fats eduble by hardening, refluting and dedocrising, will meet this steady and growing demand for hardened fats both for soap manufacture and as a cheap flee substitute.

### ALTERNATE AND SUBSTITUTE CROPS

When we think of transferring areas from one crop to another we have first of all to see whether the alternate crops suggested can be cuitivated under the same physical and climatic conditions. Secondly, we must also consider whether the cultivators are trained or in the know of the technique of cultivation of the alternate crops suggested. Thirdly, we must see that additional capital resources needed for going over from one crop to another are with the cultivators. Otherwise, the State should provide for credit at a nominal rate. Fourthly we must see that by the change suggested in the pian the cultivator's economic position remains unchanged. That means the returns from the alternate crops must be at least equal to the returns we used to get from the crop to be displaced. This brings us to the consideration of the problem of fixation of prices of agricultural commodities. The problem of price fixation and

stabilization involves many technical and economical questions, which are 'beyond the scope of this essay. But the problem must be solved with the definite view that the cuttivator's position should remain unchanged if not improved. Last but the most important suggestion is that the changes in areas under different crops should be planned and advocated after deep and serious consideration and thought. Instances are not wanting when the innovations suggested were withdrawn within a few years. We have at the same time to tackle the problems of rent and land revenue. If a change-over is there from one crop to another, rent and revenue based on the nature of the crop grown must be modified.

### WAYS AND MEANS

Organized crop planning involves some means of influencing the grower, whether by propaganda, preferential treatment or penalty. Without some—possibly all—of these it would remain a dead letter it is assumed generally, of course, that legislative action, if required at all, should be reduced to a minimum.

Propaganda is said to be the best means, as it depends on the individual's free will and choice. But recent experiences in the case of the Jute Restriction Scheme in Bengal and the Grow More Food Campaign, show that the results are not at all satisfactory. Sometimes the cultivators take to the advice so much that there is an over-production of the crops propagated, sometimes the advice fails upon deaf years. Propaganda is said to be a one-sided weapon; it goes to either extreme,

Preferential treatment is the second means, Supply of good seeds of the controlled crops at a concession rate, provision of subsidized manures, concessions in water assessment for controlled crops and special schemes for repair of tanks, wells, etc., grant of tagal loans, free of interest for cultivation of controlled crops and leases of Government Waste lands rent free or on nominal rent for growing controlled crops, such and many others are the concessions given for encouraging the cultivators in growing certain crops. Here we have to say that the individual will again is given free choice; the results, therefore, cannot be accurately anticipated.

The third and the only means which can give guaranteed results is Legai compulsion. It would involve either (a) the limiting of the crop to an authorised proportion of the holder's area throughout the province or specified areas thereof; or (b) seasonal scheduling of areas, rotating by districts or other suitable units, within which the specified crop would be regarded as unauthorised in whole or in part. Unauthorized sowings would be subject to disabilities in the withholdings of tagai advances or nonrecognition or remissions in the event of crop failure. Charges for irrigation water, the supply of which could not be prevented, would be raised against unauthorized sowings to make them uneconomic. Some times subsidies to authorized growers would be given and/or prices guaranteed. This way is the most effective way and results can be secured cent per cent.



the country must spread most effectively, most beneficially. Whoever has something useful

to offer present-day India must get the fullest opportunity to do so. Not one article to aid the work of the Indian world and to save its labour as well as time must go unenconraged, unassisted. The guiding principle of the HOUSE OF FAZALBHOY is to earry trading traffic in the future to its maximum and its optimum.

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We throw our aloors open both to Indian-goods manufacturer, and foreign-goods importers. HOUSE OF FAZALBHOY has an international outlook. It provides facilities to all: it has no narrow and rigid method of husiness. Enormous resources are behind it and alert intelligence is at work here in combination with minute knowledge. Not only throughout India is its enterprise distributed, but also in New York and London it has offices.

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There is a considerable consumption of vegetable oils in India and the internal demand will increase with increase of population and the scarcity of ghee and butter. A still more important outlet for vegetable oils he so in industrial development. There is a great scope in India for the manufacture of soaps and vegetable fats. India imports approximately 300,000 cwt. of soaps and vegetable ghee and fats etc. worth one crore rupees approximately, every year. Factories must be started anew, and the present ones, given encouragement, which may render vegetable oils and fats edible by hardening, refining and deodorising, will meet this steady and growing demand for hardened fats both for soap manufacture and as a cheap ghee substitute.

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stabilization involves many technical and economical questions, which are beyond the scope of this essay. But the problem must be solved with the definite view that the cultivator's position should remain unchanged if not improved. Last but the most important suggestion is that the changes in areas under different crops should be planned and advocated after deep and serious consideration and thought. Instances are not wanting when the innovations suggested were withdrawn within a few years. We have at the same time to tackle the problems of rent and land revenue. If a change-over is there from one crop to another, rent and revenue based on the nature of the crop grown must be modified.

### WAYS AND MEANS

Organized crop planning involves some means of influencing the grower, whether by propaganda, preferential treatment or penalty. Without some—possibly all—of these it would remain a dead letter. It is assumed generally, of course, that legislative action, if required at all, should be reduced to a minimum.

Propaganda is said to be the best means, as it depends on the individual's free will and choice. But recent experiences in the case of the Jute Restriction Scheme in Bengal and the Grow More Food Campaign show that the results are not at all satisfactory. Sometimes the cultivators take to the advice so much that there is an over-production of the crops propagated, sometimes the advice falls upon deaf years. Propaganda is said to be a one-sided weapon; it goes to either extreme.

Preferential treatment is the second means. Supply of good seeds of the controlled crops at a concession rate, provision of subsidized manures, concessions in water assessment for controlled crops and special schemes for repair of tanks, wells, etc., grant of tagai loans, free of interest for cultivation of controlled crops and leases of Government Waste lands rent free or on nominal rent for growing controlled crops, such and many others are the concessions given for en couraging the cultivators in growing certain crops. Here we have to say that the individual will again is given free choice; the results, therefore, cannot be accurately anticipated.

The third and the only means which can give guaranteed results is Legal compulsion. It would involve either (a) the limiting of the crop to an authorised proportion of the holder's area throughout the province or specified areas thereof; or (b) seasonal scheduling of areas, rotating by districts or other suitable units, within which the specified crop would be regarded as unauthorised in whole or in part. Unauthorized sowings would be subject to disabilities in the withholdings of tagai advances or nonrecognition or remissions in the event of crop failure. Charges for irrigation water, the supply of which could not be prevented, would be raised against unauthorized sowings to make them uneconomic. Some times subsidies to authorized growers would be given and/or prices guaranteed. This way is the most effective way and results can be secured cent per cent.



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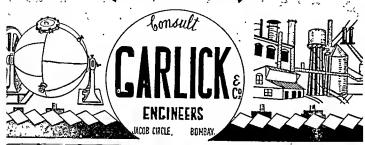
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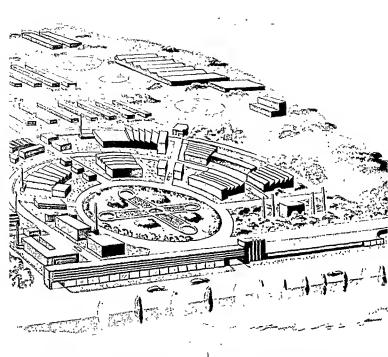
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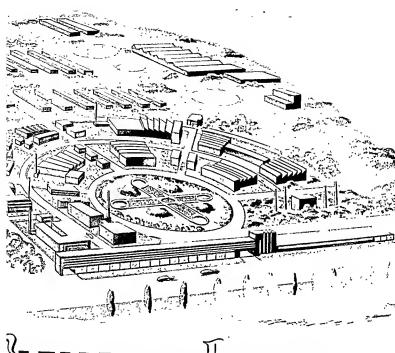
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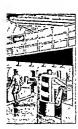
ever and baths a delight and hygiene a hyury. Nor will the more intricate pursuit of heanty be neglected—cosmetics and toilet preparations of the highest quality will—take—glistening and fragrant shape to help the fair sey be still fairer.

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administrative control with all the favours and conveniences which administration can offer to or withhold from individual businesses, control of public works, exclusion of Indians from all opportunities of high administrative experience and finally a financial burden, direct and indirect, of a foreign administration which made no small inroad year after year on the slender capital resources of the country. Even if a free economy had met no obstacles in the social and historical forces arrayed against it in India, such conditions must necessarily preclude normal, beneficial tendencies of a free economy.

It is no accident but an automatic and inevitable consequence of this imperialistic exploitation of the convenient doctrine of free trade that the industrial growth of India has suffered from grave deficiencies. One such grave deficiency is the complete absence of basic and constructional industries. The other deficiency is the absence of domestic and cottage industries such as should arise out of an agricultural economy like ours.

The absence of basic or constructional industries means two tremendous drawbacks for the economy of a country. It means in the first place a low level of technical or engineering knowledge and skill which cannot but have very adverse reactions on the level of productive capacity in other lines as well Secondly, it makes the economy of a country entirely dependent on other countries and thus incapable of profiting from such rare opportunities as occur in the history of every country on account of wars and other factors.

Among the factors which have contributed to the growth of these industries in different countries, two have to be specially noted as outstanding. The construction of railways, irrigation-works and ports, during the 19th century, was one great stimulus to the growth of coal, iron, machine and other lines of production. In the case of certain countries like Russia, care was taken that domestic production of these industries should be encouraged and availed of in as high a proportion as possible, even when such a policy meant higher costs. Like other countries, India also saw during the 19th century a large growth of rallways Irrigation-works and ports, very largely under the initiative of the British Government. But there appeared no basic and constructional industries on the Indian horizon. Instead, investment and expenditure in India served to stimulate and expand the capital goods industries of Great Britain.

The country is faced with a choice between two alternative policies, the old policy of a free economy with tariffs and other alhed means of stimulation or the new proposal of a planned investment with a relatively closed economy. The old policy has failed for some special reasons to develop either basic industries or domestic and cottage industries. A planned investment appears to promise an early remedying of these deficiencies. But the main problem of this economy is administrative—the problem of a qualified executive, a competent public anthority

to which the executive is to be answerable, the organisation of appropriate administrative personnel and, above all, prevention of a total corruption and demoralisation of public and private life.

The other factor which explains the rise of these industries in other countries is the peremptory needs of defence on outbreaks of war at home or abroad. From the earliest times, however, it has been the deliberate policy of the British Government to depend for all important equipment and apparatus of war on imports from England. Even the first world war proved ineffective to change the policy of England on this question. It is highly doubtful whether the disastrous vicissitudes of the second world war have led to a real or substantial change in the economic policies of defence.

#### COTTAGE AND DOMESTIC INDUSTRIES

The governing condition of the type of industrialisation suited to India is the abundance of labour relatively to land and capital. This abundance is made still greater by the partial employment of rural labour tied to, uneconomic and scattered holdings. In such a situation, the use of less machinery and more labour should tend to place a high premium on cottage and domestic industries. These industries need, however, certain factors like power, selling and marketing organisation, which cannot be supplied cheaply unless undertaken on a large scale. Unfortunately, for more than a century, Great Britan forced on this country a policy of administrative laissez faire which barred any development along these lines.

#### THE IMMEDIATE PROSPECTS

It should cause no surprise if even in these times. England proves the main obstacle to the growth of these basic industries. During war, except for food and clothing, her production of consumption goods of the nation has been all concentrated on the output of ammunition, tanks, naval craft and aeroplanes. In other words, when the bugle of war has ceased to sound. England must find herself with an equipment which can turn out a continuous stream of capital goods but which will be ill-suited for the ordinary consumers' goods With a little adaptation. tractors, cranes and steam-rollers can take the place of tanks, transport planes the place of fighters and bombers, tools and machines the place of shells and ammunition. As technicians know well, a factory for rifles becomes a factory for sowing machines with far less difficulty than the layman imagines. Where will England find the markets for this stream of selective capital goods? War-devastated but free countries will desire, no doubt, very keenly to re-build their consumption goods industries. But then, they will desire even more keenly to re-bulld the basic crafts of their industries. Dependent India, however, has served in the past the cause of British basic industries. What was done in the past can be reproduced in the future on an even more gigantic scale. A policy of public investment in India can replenish the industries of England worn out and exhausted by several years of war. The post-war

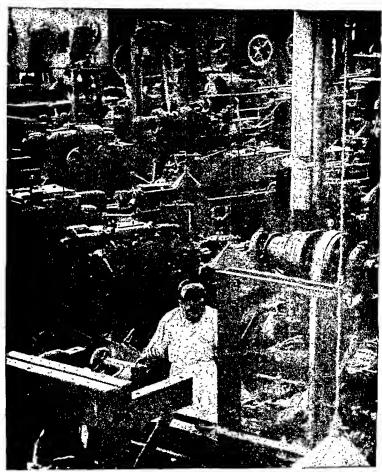


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Industrialization will fust come to stay to future India. This undid view of the Indian machine fuctory is typical of the working of the many new industries in the country. It also brings out strikingly the growing contrast of man and the might of the machine which India will lace to adopt itself to and interpret in its own terms.

planning of India will thus turn out in the end to be a part of the post-war planning of England.

The stage has been well set for a large flood of flation on an unprecedented scale has expanded the incomes of the business and capitalist classes at the expense of unorganised labour and fixed-income receivers generally. A price level far higher than in the leading countries of the world cannot but be the focal point for goods from every corner of the earth till the exchange rate or domestic costs and incomes fall to their economic level. The existing inflation, colossal as it is, may, perhaps prove a small thing compared with the potential inflation represented by wast hoards of coin and currency which have sought hidding places against the high level of income, super and excess profit taxes.

#### PLANNING FOR INDUSTRIALISATION

What are the chances of meeting this situation in the immediate future <sup>3</sup> Under the ideas of planned or controlled economy, prevailing just now, it appears that reliance will be placed very largely on three converging means to achieve the desired progress. These three instruments are control of capital issues and investment, control of imports, and finally State initiative, assistance or enterprise in certain cases. Within the limits of these restrictions, private enterprise and competition are likely to be left full freedom to achieve the most efficient results possible.

#### ADMINISTRATIVE ASPECT OF PLANNING

Difficult as are the analytical problems of a planned industrial economy, immensely more difficult, and, from the standpoint of ultimate success or failure, more decisive is the administrative problem of each economics. No degree of cautiousness is superfinous or care unwarranted which may be bestowed on this aspect of our post-war national economy. At this stage nothing more than general principles which must guide and influence us in our choice of the various alternatives could be profitably discussed. For, sensitivity to each new experience, and fertility in expedients rather than dogmatic adherence to a priori theory are the main condition of success in this field.

#### THE POLITICAL STRUCTURE

Economic planning of the kind we have in view has to be based on two presuppositions. In the first instance, the country must have an abundance and free domestic interchange of all kinds of raw materials and natural resources. Less the abundance or greater the costs of movement, the greater must be the moral and material costs of planning and greater the loss of economic welfare. Secondly, when administrative controls and restrictions are inseparable such economics must not be exposed to more than minimum leakages and loopholes. Just as water inevitably seeks the lowest levels, so do profits and goods seek as inevitably the highest level of valuation. If investment or goods are restricted in their profits in the Bombay province, they

are sure to seek asylum in the Madras province. It the hand of economic controls is heavy on British India, Native States will surely be turned into a paradise of economic freedom. This means two things. Firstly, India must be maintained as an administrative unity. Secondly, the Central Government must have the maximum and not minimum authority—a lesson which the history of the United States holds out more clearly than any other. In short, the choice lies between pakistans or a decent standard of existence for masses.

Much more intricate is the question of evolving and directing the enormous business responsibilities of economic planning. Existing governments are more or less well suited for activities which for the lack of a more suitable word may be described as political. The new situation sets before us a two-lold task—to create an executive authority which can take and carry out business decisions and, secondly, make this authority responsible to public polinion which is competent to guide and check them.

#### FINAL RESPONSIBILITY UNDER PLANNING

Since the tests of political activity and of business are quite different, it would make responsibility more definite and easily ascertainable if the supreme executive of the country were split into a political and a commercial or business section. The heads of the latter should tend to have more of business qualifications and in order to ensure that all relevant experience is represented in the final decisions, they could act in conjunction with statutory boards, like the Rly. Board, consisting of consumer, business and labour representatives. Since private enterprise will continue to discharge its normal role in many sectors of our economic system, it should not be difficult to attract men of business abilities and acumen into the service of the country. The present commercial activities of the Government will as a matter of course pass into the hands of the commercial section of the executive. Aithough the executive is thus spiit into two sections for purposes of responsibility, it does not follow that they should make the impossible effort of thinking of their country's needs in compartments. Deliberation should continue to be joint so that action in one department is examined in the light of and supported by parallel action in other departments. Examples of such boards would be a Textile Board, and Iron and Steel Board, Cottage Industries Board, Housing and Public Works Board, Transport Board etc.

#### RESPONSIBILITY TO THE PUBLIC

Far more vital is the problem of enforcing ultimate responsibility to a competent public opinion and preparing and presenting the budgets and results of commercial activities in a form suited to this objective. Competence can flow only from relevant qualifications. It is highly unlikely that an assembly elected on a territorial and citizenship basis will ever muster that high degree of talent, technical experience and weight which alone can secure vigilance at the requisite high level. Some kind-of functional representation directed more to

ensure preponderance of knowledge and experience than any weighting of conflicting interests would most probably give us an assembly suited to the purpose in view. This might appear un-democratic but in the long run, it will not be too high a price to pay for the enormous risks unavoidable in any serious economic planning. The objection could be partially net if the political assembly is allowed to contribute by election a certain element-for example upto one half-to the new economic assembly whether from within itself or outside. To reduce the toll and turmoil of too many elections, the buik of the remaining seats could be allotted ex officio to federations of ndustries, labour, trade co-operation, and universities. It is to this economic assembly that the economic section of the executive will be finally responsible,

Our conception of responsibility developed enirely in the context of political functions will have to se adapted to the new functions in view. While the collective responsibility of the economic executive to the economic assembly need not be abandoned, it must be recognised that with a general policy approvid by the assembly the occasions for enforcement of each responsibility will diminish very much. Much nore frequent will be the occasions when the success or failure of each individual board or line of production will have to be judged and pronounced upon. It follows that the retention or dismissal of a member of the economic executive should be allowed to take lace without reference to the fate of his colleagues.

The arrangement proposed above offers some other special advantages. It is a commonplace that our present political executives and legislatures are secoming progressively more and more over-burdened. White members of the political executive need not be pecifically excluded from the economic assembly, hey should be at liberty to absent themselves.

#### PERSONNEL OF ADMINISTRATION

One very delicate problem of a planned economy would be the initial appointment and subsequent reatment of employees of enterprises whether nanaged or owned by the community. Appointnents by the Government are ordinarily much distinguished by very nice discrimination of the many lefinable and indefinable qualities which make for success in business. Appointments in India are very much less so, efficiency having a priority very much below colour of skin, brand of communal or religious affiliation, political object to be served, push and pressure of social influence. Fortunately, as the functions of the Government are, relatively speaking, rather circumscribed, the number of employees, although large, does not aggregate at present to more than a very small fraction of the gainfully occupied population. But, as these functions include more and more ownership, management or control of economic enterprises, an appreciably large fraction of the population will come to depend on State employment as the source of their livelihood. Appointment by permanent commissions attached to each board of management and thus splitting among themselves

the enormously increased power of patronage might to an extent meet the initial difficulty. Much greater difficulty is raised by the question of subsequent treatment. It is well and truly said that while it is very difficult to obtain a post under the Government, it is much more difficult to be dismissed from it unless it be for a crime. How many times does it happen that one is made to wonder what special irony or spitefulness of fate could have brought a particularly despicable specimen of humanity to the position of authority in a Government concern! Private enterprises are able to adapt themselves to the changing phases of business by discharge of employees, reduction of wages or withholding of promotion. It is the ball-mark of Government employment that employment is stable and wages are uniform and progressive. A low initial level of wages combined with a pooling of the fortunes of all State enterprises and profit-sharing, offers a line of policy compatible with maintenance of incentives and solvency of individual concerns.

No far-reaching plan of economic reconstruction has a chance of success unless in every detail and at every stage it is continuously examined, re-examined and assessed. Public criticism is useful as indicating how economic measures are working in actual practice. But there is criticism of another kind on an altogether different plane which must guide each or any economic plan, the criticism of those who can judge individual measures from the standpoint of ultimate principles and objectives. In economic life, it is inevitable that progress along one line involves sacrifice along some other ine or that objects desirable in themselves tend to produce reactions least expected and ultimately regrettable. The extent of the danger will be in proportion to the countless multiplicity of the decisions to be taken and the numerousness of the authorities which have to take them. There must be provision in the whole plan for an impartial and independent court of economic judgment which has access to all facts and figures and which is competent and free from time to time to pronounce opinions to which the public and the authorities will give heed. In familiar language, there will have to be an institute of economic research and investigation.

#### DANGER OF MORAL CORRUPTION AND DEMORALISATION

The greatest hurdle of planned economy or economic planning is no doubt the enforcement of all sorts of price controls, priority allocations, rationing, restrictions, iterasing and prohibitions. Unless human nature is transformed overnight or means devised to ensure, not over a few months or years but over decades, sustained operation of noble emotions and exertions distinguishing a period of war and struggles, such enforcement must encounter all kinds of evasion like sabotage of quality, concealment of stocks and creation of black markets. Unless surevasion is kept within certain not too wide limits it would be difficult to save the whole experiment from ignominious collages. Nor is the danger to the

#### 15 Years Ahead

rectitude of public administration less grave than to the morality of individuals. An enormous multiplication of authorities is inseparable from such all pervasive and over-all controls and competition for their favours might well become a part of the established rule of life under a planned economy. The remedy which suggests itself most easily and which certain dictatorships have already put into practice is the endless creation of new penal offences and intensified savagery of punishment. An atmosphere of public terror is, however, incompatible with the growth of self-respect, self-discipline and self-government on which alone the permanence of a

social order must ultimately rest. While the big rod of the penal code could not perhaps be altogether avoided, an effort which depends very largely on mustering of all the moral and spiritual resources of the people through every means of education and propaganda available to them promises much more permanent success. Social exposure and ridicule and incrumstances not less effective than the pedestrian kinds of punishment and a country which has produced in a single generation a Gandhi or a Jawaharial Nehru need not altogether distrust its capacity to summon adequate moral forces for a great cause.

### PLANNING OF HEAVY INDUSTRIES

P. C. IAIN

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In his nelicle below, Prof. P. C. Jain gives an authentic and rivid account, profusely supported by up-locality statistics, of the various Henry Industries that exist loday, Indiral, a correct and collative survey of facts in indusys essential for the formation of policies and principles regarding the building of the industries of tomorrow. Prof. Jain's discussion of the Heavy Industries with the relative importance of each musked out in the perspective of planning is bound to be of great help to economists and industrialists alike.

THE heavy industries were comparatively neglected in India in the pre-1939 period. This naturally led to a lop-sided industrial development of our country and we have all along been handicapped by that deficiency. The heavy industries are the pillars on which industrialisation rests and in order to ensure smooth and rapid industrial progress it is essential to plan a co-ordinated development of them. It would be necessary to expand and reorganise the productive capacity of existing industries and to start some new ones in order to achieve a balanced economy.

#### IRON AND STEEL MANUFACTURING

Up to 1939. Inspite of temporary set-backs, the Indian iron and steel industry made unqualified progress in the pre-war period. The output of pig iron in 1939 amounted to 1.8 million tons as compared to an output of much less than 0.2 million tons before the 1914-18 world war. The production of steel ingots and castings by 1939 had increased to more than 1.0 million tons and that of finished steel to 0.8 million tons. The Indian production has gradually replaced foreign supplies in the internal market, The imports of iron and steel of all kinds into India declined from 0.8 million tons before the last war to 0.27 million tons in 1939. The Tatas have supplied an increasingly large proportion of the Indian market. Their share of Indian consumption of the type of steel manufactured by them increased from 17.6 per cent in 1923-24 to 76.2 per cent in 1937-38. On the other hand, the exports of plg iron increased from about a quarter million tons in 1924 to over half a million tons in 1939 and, over the same period, the exports of iron and steel increased from a nominal amount to one hundred thousand tons.

The Tatas and other producers were successful in gradually increasing the efficiency of production and consequently lowering down the costs and prices. As between 1925-26 and 1932-33 the Tatas' works costs, for different articles manufactured by them, declined on an average by 38 8 per cent. In the subsequent five years, owing chiefly to higher prices of eoal, the works costs fell by a smaller amount which averaged only 9 per cent, but though this reduction in costs is small it is none the less significant as it indicates the increasing efficiency of the Indian iron and steel industry. The producers in India have suffered severe cut-throat competition from English and Continental producers, but they have been able to meet it successfully partly because of the antidumping duties and bountles and partly because of the increased effleiency of production.

There has been some disorganisation in the internal market and the re-rolling inilis in the south have complained of severe cut-throat competition at the hands of bigger producers in the north. In August 1939, a conference was called at new Delhi to settle this problem in which it was proposed that quotas might be fitzed, markets delimited, and prices controlled. But the conference ended without coming to any agreement as it was not found possible to define "unfair competition", much less to decide whether unfair competition was being offered in the market. The commencement of hostilities in September 2018.



Industrialism is a cell and a chill mas to Indian youth. It is a great opportunity for their employment but at the same time it is a trial for their skill. The machine at work demands keen interest, promptess and chara ettention. The product of the skill is a trial for their skill.

tember 1939 and the subsequent Government control made further consideration of this problem un-The chief producers of steel - the Tatas, the Bengal Steel Corporation and the Mysore Company - have come to a mutual agreement about prices and production. The output of the Bengal Steel Corporation is sold through the extensive selling organisation of the Tatas. This considerably improved the internal organisation of the industry and cut-throat competition and over-production were both overcome in the immediate pre-war period. The years from 1934-1939 recorded an unqualified progress and the Indian industry produced plain carbon steel, structural plates, galvanised sheets, rails, tinplates, and bars. A limited quantity of special ordnance steel was produced in the Government Metal and Steel Factory. A number of subsidiary industries produced finished goods for the market.

The War Perlod. During the war years all the units were fully booked with orders and production was not interrupted except for short and temporary periods. In 1944, according to one estimate, we produced 2.5 million tons of pig iron, 1.6 millions tons of steel castings and ingots, and more than 1.2 million tons of finished steel. This marks an increase of 39 per cent in the output of pig iron, 60 per cent in the production of steel ingots and castings, and 50 per cent in that of finished steel over the pre-war output. A relatively greater increase in the production of steel has been due partly to the increased productive capacity brought into operation by the Bengal Steel Corporation and partly to a greater utilisation of scrap by the Indian re-rolling mills. Owing to the war the scrap could not be exported abroad and the re-rolling mills found it profitable to utilise all the scrap that was available.

The re-rolling mills in India have been divided into three classes. To class A belong those big mills which do not use scrap but take billets from the parent industry. The B class mills consist of medium sized re-rollers and some possess their own small electric and basic furnaces to make billets and also purchase billets from the market when necessary. They also use scrap. The C class mills have crude locally made rolling mills and use scrap. In

1944, there were 7 A Class, 33 B Class, and 59 C Class milis in existence and the Steel Controiler decided to close down 87 of these mills from 1st June 1944, as, in his opinion, 12 mills could produce the target amount of 10,000 tons per month which was required by the Government According to the Steel Controller, the 7A class mills can produce 5,655 tons per month which would be much in excess of demand and, in view of the shortage of coal and scrap, the best policy would be to close down the redundant mills. The re-rolling interests, however, have contested Gov-

ernment estimates of production and according to them the output of A Class milis does not exceed 3,554 tons per month and that of B Class milis 2,642 tons, per month, which gives a total output of 6,200 tons per month. Accordingly, it is possible for all the rerolling mills to function and the roal quota of 4,000 tons would be enough to keep them in production. The closing down of some mills is altogether unfair. This places these mills in an unfavourable position in the present post-war period.

The Iron and steel industry suffered acute shortage of coking coal, man power and transport and, in spite of the fact that the iron and steel industry was of fundamental importance for the war effort, it was not possible to overcome these difficulties adequately. Moreover, the taxation policy of the Government and a rigid control of Iron and steel prices from the very beginning reduced profits. In consequence, the average dividend declared by the engineering and metal works was lower than that declared by most other industries. In 1943 the average dividend amounted only to 12.22 per cent as against an average dividend of 15 per cent in 1942 and 13.66 per cent in 1938.

But in spite of low profits and high labour, coal. and other costs the productive efficiency and the range of articles produced have both increased during the last five years. The latest figures of costs of production are not available but the cheap prices at which the Iron and steel industry is able to supply Government demand is indicative of a great improvement in productive efficiency. New types of steel are now manufactured in India. The Tatas have evolved a method of producing acid steel which is vital to the manufacture of wheels, tyres, and axles, A number of alloy and special steels sultable for armament making, high speed steels for machine tools, and stainless steel for surgical instruments are now produced in India. We fully share the tribute which Mr. G. W. Tyson, in his excellent book called 'India Arms for Victory', pays to the Tatas;-

<sup>10</sup>The manufacture of armour plate, or armour piercing steel, is not easy of accompolishment. In peacetime individual countries do not exchange information on the subject, and armament firms are no more communicative to one another than their respective governments.....,the fact remains that a findia produced armour plate and armour piercing steel after much tribulation. The General Staff at first asked for a good substitute for armour plate, so sceptical were they of the ability of this country to produce the real staff. But Tatas went one better than the official indeat. They replied with armour plating that has stood up to the most stringent official tests, which cannot be said of all the armour plating that has been tried by the military authorities in this country."

In future alloy steels will play a predominant role and the war-time technical achievements will give great strength to India's iron and steel industry,

Future Prospects, India possesses enormous quantities of iron ore, coking coal, electric energy, fluxes, and refractory materials. During the last thirty years we have gained much experience, have given technical training to labour, and have established a highly efficient industry. According to a reliable estimate quoted by Dr. Fox before the Tariff Board the hematite ores of the 'iron beit' alone contain 2.832 million tons of ore with 60 per cent iron content. There are other resources in C.P., Mysore, and Kumaon. These resources should be more than sufficient to sustain production of pig fron and steel at present levels for over five centuries. The total reserves of coal are estimated at 50,000 million tons and, though most of this coal is of poor quality, a part of it is perfectly suitable for the production of metallurgical coke. In his evidence before the 1924 Tariff Board, Dr. Pascoe, the Director of Geological Survey of India, stated that, assuming 3 tons of coking coal to be necessary to produce 21/4 tons of coke, there is enough coking coal in India to supply the iron and steel industry with 4 million tons of metallurgical coke per annum for at least 150 years. This has been considered an under-estimate. Moreover, the supply of coking coal can be supplemented by electric energy. The only consideration, therefore, determining the amount of production in the future would be the market demand. It is reasonable to expect that with greater industrialisation of the country and the

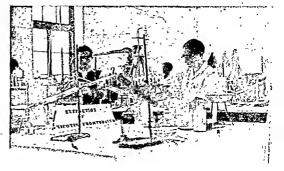
growth of India's machine manufacturing and other allied industries the demand for iron and steel would increase. It is also likely that, owing to new developments in the field of alloy\_steels, new uses will be found for steel. This industry can, therefore, count upon a much greater demand for its output in the days to come.

"The Government of India proposes to set up 29 panels for different industries and it is reported, that an increase of 80 to 100 per cent in the present output of Iron and steel would, be indicated to the relevant

panel as a provisional target for the first effective five-year post-war period. The 'Bombay Plan' has proposed an increase of 500 per cent in industrial production in the first fifteen years of post-war reconstruction. The available resources in India 'can support a five-fold or even an eight-fold increase over present production of Iron and steel, but that would depend on future demand, which at present, cannot be estimated even approximately. We have to plan for increased production but the exact amount of output will be decided in the light of future experience.

India possesses sufficient amounts of coking coal, but not enough for us to be able to waste them. It would, therefore, be necessary to utilise poor quality coal in generating electricity so that the use of the electric current might release metallurgical coal from the railways and other consumers who can as well do without it. In order to conserve the available supply of coking coal it might be necessary to control its output and distribution. Secondly, in the case of such a basic industry as iron and steel the transport charges should be adjusted to the needs of the industry If the railways charge unreasonably high rates, as has frequently been complained by the iron and steel industry, it would not be possible to ensure cheap supply of steel to the machine manufacturing and other industries. And now since all the major railways are State-managed it should be perfectly possible to draw up a schedule of telescopic rates for the iron and steel and other industries, which are reasonable both for the railways and the industry. Finally, care will have to be taken to protect the iron and steel industry from internal disorganisation and external cut-throat competition. Both of these features handicapped it in the past. During the iate war the productive capacity in all the steel producing countries greatly increased and, in spite of the fact that the Indian industry is highly efficient, a powerful foreign cartel may find it possible to dump iron and steel goods in India at very low prices. In order to protect the industry against this danger it will be necessary to keep wages of labour, price of coal, and transport charges at reasonable

Industriel leboratories have already been established in India. Their number will increase, for without them, industrialishin cannot grow and develop. With their several read for scientific experiments indian students will play a great note in the properses of laboratory work and research. Pates by B. F. Farietra.



levels. It is not suggested here that the iron and steel industry should pay uneconomically low wages and prices, but while fully safeguarding the interests of the labourers and the producers of coal, it is necessary to ensure that these prices are not so high as cannot be paid by the industry. It is equally in the interests of labourers and the coal producers that the industry is not runled, and in the last analysis the capacity of Iron and steel industry to withstand foreign competition would depend upon its relative costs of production. Moreover, the iron and steel industry is in urgent need of improving its internal organisation. A foreign cartel would not indulge in systematic permanent dumping if it has to face a powerful rival which is fully prepared to take up the challenge. Such dumping has a chance of thriving only when the rival is weak and is expected to be eliminated from the field. A central organisation of India's iron and steel producers would be sufffciently strong to fight cut-throat competition. But if the measures adopted by this organisation do not prove successful it might be necessary to levy special ad hoc anti-dumping duties or to control imports on a quota basis. The Government of India can help the industry by providing these facilities.

#### ALUMINIUM SMELTING

Large deposits of good quality bauxite exist in C.P., Bihar, Kashmere and the Bombay Presidency. Before the war we produced 14% thousand tons of bauxite per year all of which was exported as we did not possess a single smelting plant at that time and we imported, on an average, 3500 tons of aluminium sheets per year for being pressed into utensils by a dozen well-equipped factories. It is a sad commentary on the Government and the industrialist that, in spite of good bauxite deposits, cheap electric power, adequate sources of chemicals and clean water, we did not have a single aluminium smelting or rerolling mill.

The Aluminium Corporation of India Ltd., with a proposal to produce 3000 tons of finished aluminium sheets and circles per year near Asansol, came into existence in 1937, but owing to various difficulties it could not begin production, and that too on an experimental basis, before 1943. Some foreign enterprisers started a second company called the Aluminium Production Company of India Ltd. with a re-rolling mill at Belur near Calcutta and an aluminium smelter at Alwaye in the Travancore State. The re-rolling mill has been working since August 1941, but the smelter commenced operations only in March 1943 and produces annually about 3,000 tons of aluminium though the capacity of the plant is reported to be 5,000 tons per annum.

In the future, aluminium would be used in alloys, for building purposes and in manufacturing and other industries. Aluminium foils are already used for wrapping and packing purposes by our tea and cigarette industries. Aluminium bobbins are made for the jute industries aluminium bobbins are made for the jute industry and aluminium containers are supplied to industries which used either wood or tin containers before the war. Aluminium is a light rust-

proof clean metal and its use in the future is likely to increase enormously; hence within the first fifteen years of post-war period it might be possible for us to increase its production to 12,000 tons per annual. As in the case of from and steet, the only determining factor is the market demand. We possess all the necessary raw materials and the extent of output would depend upon the uses to which aluminium would be put in the future. It might, however, take some time in the period ahead before increased demand becomes effective and till that time the existing capacity of 6,000 tons per annum should suffice. In the first few years we shall have to consider and stabilise the industry as it exists.

#### MACHINE MANUFACTURING

Machine Tools. An adequate supply of machine tools is necessary to increase industrial production. Machine tools are power-driven machines which operate on the rough cast blocks from the foundry and steel from the rolling mill or forge, and cut, drill, bore, grind, and shape the metal into required shapes that would fit in together. Before the war, some firms manufactured machine tools for their requirements and a few supplied simpler types of machine tools to the market, but the Indian manufacturers had to depend mostly on imports. It is estimated that before 1939 not more than 100 machine tools were being manufactured in India. But production has been much expanded and rationalised during the last few years. In 1944, 260 licensed manufacturers produced 3,600 machine tools and efforts are being made to increase the annual output to 6,000 machine tools. We now produce some highly specialised machine tools of the finest quality and it is possible that we would soon be altogether independent of foreign supplies.

An increase in the supply of machine tools has been secured by a rigid control over production and sale. A scheme of rationalisation has been enforced since July 1st, 1943. Machine tools are divided into three classes. To class I belong machines which are comparable with standard imported machines and are of first class tolerance; in class II are placed machine tools of intermediate limits of accuracy in which tolerances are not greater than 1% times the tolerances of class I machines; to class III belong machines sultable for rough work with tolerances not greater than 21/2 times those of the first type. Bulk orders are placed by the Government-with big producers and a restricted number of trade orders are allowed to be placed with minor firms through the Machine Tool Controller. An effort is made to encourage mass production and the available capacity is utilised to the best advantage by ensuring that as few types as possible are ordered from any particular machine tool manufacturer.

The producers of machine tools experienced certain extraordinary difficulties at an early stage of the war. Shortages of skilled technicians, of special types of steel for machine tools, and of manufacturing machines hindered production. The Government of India imported some experts and machinery from

abroad and the Tatas have produced the required type of steel. The productive capacity of some half a dozen of the biggest manufacturers has been expanded and they are capable of producing class I machine tools in sufficient quantities. But in spite of all this effort there is a shortage of properly trained middle class craftsmen and production cannot be increased beyond a limit unless adequate arrangements are made for the training of technicians. We have imported some machine tool manufacturing machinery but, till such time as such machinery can be manufactured in India, much more of it will have to be imported to make efficient and economical production of machine tools possible.

The war being over, the machine tool capacity devoted to war work will be released for Indian industry and the extent to which we shall have to expand our machine tool capacity would depend upon the level of industrialisation we are able to achieve in the first lifteen years of post-war period. As already pointed out, effort is being made to expand-production to 6,000 machine tools per year and, if we assume that our engineering industry would expand threefold within 15 years of the end of hostilities, it would be necessary to expand the machine tool manufacturing capacity correspondingly.

Armaments and Munitions. As was to be expected, the armament and munitions industry greatly expanded during the war period and even the spare production capacity in sugar, jute, and textile mills, rallway workshops, and Government mints was devoted to the production of armaments. We shall have to maintain an armament industry even in peace-time and, when the time comes, we shall have to decide the level at which this industry should be retained.

Before the war, India had a number of ordnance factories which included a metal and steel factory, a gun and shell factory and other factories for manufacturing rifles, gun carriages, cordite and ammunition. It is not possible to give figures of production, but, during the war period, it expanded multifold and many new items are now being manufactured in India. In 1939 the ordnance factories employed 30,709 workers, but by 1943, the number increased to 1,31,076. This gives some idea of the expansion in this industry. The Chatfield Committee recommended vast changes in India's ordnance factories and further improvements were made in the proposed scheme when the war started. The total expenditure involved in expansion and modernisation under this scheme is estimated at Rs. 7 crores. The main recommendations of this Committee had been put into operation by the end of 1941 and whatever items had to be left out came into operation in 1942 and 1943. As a result, the output of Government ordnance factories has increased by 20 to 25 per cent. Further improvements were made by the Roger Mission which remained in India from the autumn of 1940 to the summer of 1941. The work was subsequently taken up by the Eastern Group Supply Council and out of 40,000 kinds of different urticles required by the armed forces 60 per cent were being

supplied by India in the first year of its existence. More recently, India has been supplying 75 per cent of these requirements and a much larger range of armaments is now produced in this country.

Internal Combustion Engines. The Exploratory Committee on internal combustion engines appointed in March 1941 by the Board of Scientific & Industrial Research, with Mr. J. C. Mahindra as chairman, report that at present four firms are manufacturing complete engines and a few large scale and small scale workshops manufacture parts for imported engines. India possesses all the raw materials and plentiful supplies of jubricants and fuels. Some special types of steel and fine machine tools are required by this industry, but these can be made available in India. During the war, much technical experience has been gained and if the Government of India gives the necessary help in importing the required machinery it should be possible to manufacture in India all the engines we need. In other countries the internal combustion engine manufacturers also produce kerosene off and petrol engines suitable for motor trucks, ciectric generators etc. and with a little effort these can also be produced in our country. But in order to make it possible the Government of India will have to help the industry in the initial stage. The Committee recommend that the Government should organise a central research workshop and the work carried out at this workshop should include pilot plant experiments, designing and planning, and testing of the research committee findings. The workshop should provide scientific guidance to the industry and without it the manufacturers would not be able to make much progress. Secondly, in order to enable the existing workshops to manufacture a sufficient number of compicte engines it would be necessary to import manufacturing pians from the U.S.A. and Great Britain. The Government of India will have to give the necessary neip in the import of this equipment. Finally, it might be necessary to grant tariff protection to this industry for some time in the post-war period, since the manufacturing capacity in other countries greatly expanded during the war and the sale of war stocks is likely to upset the market.

Textile and Other Machinery. Some engineering workshops in Bombay, Calcutta and elsewhere have iong been manufacturing parts of tea, jute and cotton textile machinery. In the U.P. and Bihar crude sugar and oil machinery is also being manufactured. The Punjab and the U.P. turn out substantial amounts of agricultural fools and implements. But for the most part we have to depend upon imports for machinery and mili work and this is a great weakness in India's industrial structure. Indian industry cannot make rapid progress unless we have a fully developed machine manufacturing industry in our country.

It may be noticed that these statistics give only an imperfect picture. The prices of all machinery and mili-work have increased and the higher 'value' totals conceal a fall in the 'volume' of imports. Secondly, the imports under lease-lend and on

Government account are not included in these figures; consequently they do not give a correct idea even of the value of imports. The imports of all kinds of textile machinery increased from a little less than Rs. 2/2 crores in 1944. The imports of cotton and woollen textile and electrical machinery have increased while those of jute machinery and prime movers have considerably declined over the last five years.

In the pre-war period the Indian cotton textile industry had 10 million spindles and 200,000 looms and, according to a recent estimate, at least 50 per cent of these along with other cotton textile machinery such as blow room machines, carding engines, etc., have to be replaced by new machinery in the post-war period It is estimated that at least 3.3 million new spindles and 50,000 new looms, along with dyeing, bleaching and printing machinery in proportion, are required to maintain the war-level of production. Moreover, the existing equipment in the factories is able to produceonly 4,500 million yards of cloth and that together with the output of handloom cloth gives a low per capita consumption of only 12 yards of cloth and if this is to be raised to 18 yards the Indian industry would require 2.4 million additional spindles and 68,000 additional icoms. Thus in the first five years of the post-war period the Indian cotton textile industry is likely to need 5.7 million new spindles and 118,000 new looms. The maximum capacity of the Textile Machinery Corporation Ltd., the only concern of its type in India, is 2000 looms and 100,000 spindles per year although the actual output of this company has been far short of this capacity. The Corporation began operations in 1941 with an initial programme of producing 250 spinning frames and 2000 looms, but, because its factory at Belghurriah (Bengal) was turned to war work and the other factory at Gwallor was short of equipment and precision tools, the original programme got upset and the Gwallor factory produced only a small number of looms. In order to meet the machinery requirements of the Indian textile Industry a few more machine manufacturing concerns will have to be started in this country. India possesses all the raw materials and the necessary technical skill and, in the beginning, only precision tools, some antomatic machinery, and specially trained technicians will have to be imported from abroad. At present we have also to depend upon imports for steel rods, steel tubes, and polished tin sheets for making ring spindles, but itis expected that the Indian iron and steel lindustry, now that it has got a resplie from war demand, would be able to supply these requirements.

of machinery by the other Indian industries, but the demand will be huge partly because the machinery in most of our industries hose become worn-out and unfit for profitable operation owing to heavy pressure of war work and will have to be replaced in whole lots and partly because an industrial expansion in India would create fresh demand for machinery. We shall have to depend on imports for a considerable

time, but with our resources it should soon be possible to manufacture finer quality sugar, tea, jute; and other machinery needed by our oil mills will have to be manufactured locally in the immediate future and only finer and complicated types of machinery will have to be imported from abroad as these would take time to be manufactured in this country,

In order to be able to set up an up-to-date machine manufacturing industry it would be necessary to import some highly skilled technicians and machine manufacturing plant. This can be done only with the help of the Government of India as forelen exchanges and the supply and exports of machinery will be under Government control for a considerable period in the future. The Government of India is in a better position to negotiate with foreign Governments and unless active steps are taken by it the imports of machine manufacturing plant might not be possible for a long time. Moreover, much larger amounts of money than at present will have to be spent on scientific and industrial research and experimental workshops before we can hope to make satisfactory progress. The Government of India will have to contribute generously to the fulfilment of this task.

#### LOCOMOTIVE, AIRCRAFT AND SHIPBUILDING

Shipbullding. Before the war India had a few repairing and refitting yards at Calcutta, Bombay, and Karachi. These yards could also produce seagoing vessels of 600 to 1,500 tons replacement but their main object was to provide repairing facilities to the ships that call at these ports. But even this facility was inadequate and greater difficulties were experienced when, after the fall of Hongkong and Singapore, the shipyards in these ports were not available to allled shipping. In India there was a great shortage of dry docks, machinery, and technical skill, and the repairing yards could not deal with the situation satisfactorily. In order to cope with the work new machinery was obtained from abroad, a few more dry docks were built and marine engines were constructed by getting parts made in railway and other workshops. Up to the middle of 1943 nearly 5500 ships were repaired, 230 vessels were produced for the Royal Indian Navy, and several large mercantile vessels and floating docks were constructed. In 1943, these repairing and building activities gave employment to 35,087 workers as against 26,999 workers in 1942. The value of new construction work now undertaken in India exceeds Rs. 4 crores.

In June 1941 the Schalle Steam Navigation Company started a modern shipbuilding yard which was then located at Vizagapatam. This yard originally had a capacity of producing 16 vessels of 6,000 to 10,000 tons replacement per annum. If we consider the maximum total tonnage which this and other shipyards in our country can build, the conclusion is inevitable that the tonnage produced would be thoroughly inadequate to support India's coastal and foreign trade. Before this war nearly 30 million tons

of cargo and over haif a million passengers were carried annually in India's maritime trade and the future Indian merchant navy, to begin with, would need atleast 4 million gross tons of shipping while at present the Indian-owned tonnage of sea-going vessels does not exceed 75,000 gross tons. There is consequently a great scope for the construction of new ships in India provided the Government gives the necessary heip. We have all the raw materials for building modern ships, marine engines can also be manufactured, the berthage and dry dock facilities have increased during the war and can be further increased in the future, and we have acquired valuable technical experience during the last four years. But at present India's coastal and foreign trade is dominated by non-Indian shipping companies and they will have to be pushed out in order to make India's costal trade available to Indian vessels. This is a perfectly fair proposition and in all the countries the coastal trade is reserved for national ships and there is no reason why we should not do the same. Later on, it would be possible for the Indian shipping companies to get a share in India's foreign trade provided the costs of transport arc kept down and the Indian merchants patronise Indian shipping. There will then be enough demand from the Indian shipping companies to sustain the output of at least two big shipbuilding yards.

Aircraft and Automobile Production. We do not as yet produce complete motor cars or aeroplanes in India. The Hindustan Aircraft Factory at Bangalore which was founded in 1940, and came under full control of the Government of India in April 1942, does assembly work and provides repair facilities to allied aircrafts. The General Motors and the Ford Company have workshops which produce motor car bodies and chassis and undertake assembly work. The General Motors started work in India in 1928 and have since then very considerably expanded their organisation. In 1942, they produced 16,781 bodies of army cars of various designs and 20,317 chassis. In 1943, production increased to an estimated total of 36,438 chassis and 23,000 bodies. The output in 1944 has still further increased. The Ford company on the other hand, concentrates on the production of more complicated types of vehicles and supply 39 different types. These workshops import engines and parts from abroad and assemble them locally. During the war considerable technical experience has been gained, and in the future, our engineering industry would be able to manufacture all the parts, including engines. It is reported that the Hindustan Motor Company has entered into an agreement with a British Company and the necessary technical skill will soon be imported for producing 'Hindustan 10' cars in India.

The production of automobiles and alteratts in India would depend upon our capacity to produce engines and parts of machinery. It is reasonable to hope that with the technical experience gained during the past few years and with our resources of steel and other metals it would be possible for us to produce the necessary types of eagines Skilled labour and other accessories such as rubber, glass, and electrical

fittings are already produced in this country and their supply can be considerably increased in the future. In view of post-war development of roads and air services the demand for motor cars and air-cartis would increase and would justify mass production, though it is not yet possible to estimate the exact number of cars and aeroplanes we would be able to produce in the future, as that would depend upon factors which have still to be investigated. But it is clear that there is a prima facte case for starting these industries and the Government of India should give all the facilities for making these projects successful.

Locomotives. A number of workshops manufacture meter gauge iccomotives in India and broad gauge iocomotives are assembled from parts some of which are imported and some made locally. The chief parts for which we have to depend upon imports are copper tube plates, boiler tubes, and super heater elements. It is reported that Jaipur Metal Works is making vigorous efforts to produce some of these parts. But even if we have to depend on imports for some time there is full justification for starting at least one large scale locomotive factory in India. An official committee consisting of experts came to the conclusion in 1940 that the optimum capacity of a locomotive factory is 70 broad gauge engines of an average weight of 145 tons each and 70 additional boilers and other spare parts equivalent to 100 whole locomotives. This factory would be fully sustained by the demand of Indian railways which over the extended period of about 35 years, the life cycle of a locomotive-is expected by the committee to be 108 broad guage locomotives and 38 meter gauge locomotives. Since this committee reported, the Indian railways have run short of locomotives and have been forced to postpone replacements and renewals. In the future, there will also be an extension of raliway mileage consequently a greater demand for rolling stock and locomotives. The demand would be sufficient to sustain at least one big factory and the Government of India will soon have to give the necessary assistance in importing the required machinery in order to make production possible.

#### HEAVY CREMICALS

Sulphuric and Other Acids. Sulphuric acid Is a basic product of the heavy chemicals industry and it is of vital importance for producing other acids and saits. Before the war nearly 23 factories produced under 30,000 toas of sulphuric acid per annum. Production has since been greatly increased by working the existing plants to full capacity and by setting up half a dozen new producing units and the output in 1944 Is estimated at 80,000 tons. Production of sulphuric acld in India has suffered from two defects. The producers have to depend on imported sulphurwhich, before the war, was obtained mostly from Japan and Italy and the industry was seriously upset when these imports ceased. Moreover, sulphuric acid has been produced in India on a small scale which means high costs of production. In the last four years, both these defects-have to some extent been

removed. Now we have a number of large scale units. and iron pyrites and gypsum, of which we have considerable supplies, are partly being used for producing this acid. In the future, as India gets industrialised, the demand for sulphuric acid will increase and in the next five years we may have to increase its output by 50 to 100 per cent. Large deposits of rock sulphur have been located by the Geological Survey of India in Baluchistan and near Sanni. In the years to come, these deposits might very well form the basis of India's suiphuric acid ladustry.

We produce small amounts of hydrochioric acid but the method used is antiquated and consumes too much sulphuric acid, which we can lil afford. It is, however, expected that with the Importation of modern electrolytic caustic-chlorine units it would be possible to produce hydrochloric acid by up-to-date methods. We would then be independent of foreign supplies. We also produce small amounts of nitric acid from nitrates and as a by-product in ordnance factories. The production of nitric acid from nitrates involves the use of suiphuric acid and in the future we shall have to resort more to the modern method of ammonia oxidation for its production. For organic acids, such as tartarc, citric, and oxalic, we have still to depend upon imports though a factory in the Punjab now produces exalic acid. A factory near Ahmedabad produces 300 tons of acetic per year from acetate of lime while another factory in Bengai produces this acid from alcohol. In the future it would be necessary to increase the output of all these acids.

Aikalies. We did not produce any aikalies, except for very small amounts, before 1940 and had to depend upon imports. It has been estimated that before the war our consumption of caustic soda, soda ash, and sodium bicarbonate amounted to one lakh tons per annum. In 1938-39 we imported 25,000 tons of caustic soda and 68,000 tons of soda ash. This dependence upon imports was a serious facuna in our industrial system and the danger of such a situation was brought home to us when the war started. During the last four years this deficiency has to some extent been made up and we now produce considerable amounts of aikalies in this country.

The present consumption of caustic soda is used by soap and allied industries, one-fourth by textiles, and nearly one-eighth by the paper industry. The Indian output is estimated at 25,000 tons. When the Tata Chemicals and the new electrolytic canstleehlorine units come into full production the output will increase, but there would still remain much scope for further expansion. As soap, paper and textile industries expand, the demand for caustie soda would increase and it would consequently be necessary to increase its production. We now manufacture nearly 45,000 to 50,000 tons of soda ash while our annual consumption is 80,000 tons. We depend for bleaching powder upon imports though recently Indian production has increased to 4,000 tons per annum and the Government factory at Rishra can produce an additional amount of 3,000 tons. It is possible to

replace bleaching powder by liquid chloring and we now produce 2,600 tons of it and more is expected to be produced in the future. Even before the war we produced potassium nitrate but since then other salts of sodium and potassium are also being produced in smail amounts. Producton of bichromates was started in 1941 and now 12 plants manufacture nearly 3,000 tons per annum. An equal amount is imported from the U.K. and U.S.A. All the raw materials, however, are available locally and there is much scope for increasing production. Chrome orc is found in abundance in the Mysore State, Bihar, Baluchistan and we now have sufficient supplies of soda ash, lime, sulphuric acid and coal, and local production of bichromates can easily be increased to 5,000 tons per anaum. Bichromates are used mostly in leather tanning and match industries, for khaki dyeing, and for producing paints and pigments. As these industries expand in the post-war period the increased output of bichromates would be readily absorbed and more may have to be produced.

Fertilisers. In spite of the fact that India is primarily an agricultural country we have been producing very small amounts of artificial fertilisers. In 1939, according to one estimate, we produced about 20,000 tons of sulphate of ammonia and 2,600 tons of super phosphates while the annual consumption amounted to 90,000 tons. We export bones, bone meal and saltpetre rather than convert them into manure locally. This partly explains the low yield of agricultural commodities and the great shortoge of food that we felt during the war years.

At present we produce nearly 35,000 tons of suiphate of ammonia per year partly by synthetic means and partly as a by-product in the manufacture of metallurgical coke. The Gowing Technical Mission. which visited India in June 1944, recommended that a single-factory for producing 350,000 tons of suiphate of ammonia per annum might advantageously be set up at Harduagani near Aligarh in the U.P. The factory would cost Rs. 10.1 crores and would be able to produce the fertiliser at Rs. 114 per ton. The report of the Technical Mission came in for much public criticism and the Government of India has decided to set up a Government-owned factory at Sindri near Dhanbad in Bihar and not in the U.P. as about 50,000 tons per annum out of which half is -recommended by the Mission. This factory would probably use the modified form of Haber-Bosch process in which hydrogen is obtained from water gas and nitrogen from producer gas and gypsum is used instead of sulphur. Travancore wlii soon begin to produce 55,000 tons of sulphate of ammonia per annum and If we add to It the present output In British India and the proposed production at Sindri the annual output of suiphate of ammonia would come to half a million tons. But this would be most insufficient if Indian agriculture is to be put on scientific lines. In the next five years the output of this fertiliser may have to be increased to 2 million tons and within the next fifteen years to 10 million tons or more. Moreover, in addition to the sulphate of ammonia it would be necessary to produce phosphatic and potassic fertilisers by utilising the bone and other raw materials which are at present exported.

During the last two years India's heavy chemicals industry has faced shortages of coal and transport and as yet these difficulties have not been solved satisfactorily. In the post-war period much bigger problems will face this industry and only a sympathetic attitude of the Government of India can solve some of them. As the producers in other countries are released from war work they will be free to capture markets in India and in order to safe. make orderly progress and part of this money will

may be necessary. Moreover, for such time as Iadia cannat produce her requirements of chemical machinery, the Government of India will have to give the nccessary help for importing it. Finally, the heavy chemicals industry, as other Indian industries, suffers from lack of scientific research. Most producers are satisfied with obsolete methods of production which involve higher costs and greater waste. This places them in an unfavourable competitive position. Much more money will have to be speat on scientific and industrial research, before the industry can hope to guard the young Indian industry tariff protection... have to be provided by the Government of India.

## PLANNING OF SMALL

### INDUSTRIES 1

V. G. RAMKRISHNA AYYAR

V. G. Ramkrishna Ayyor, M. A. Lecturer in Economics, Annamalal University, Annamalainagar, is the outher of 'Email Scale production in India', 'Distribulive-Co-operation', 'The Economy of a South Indian Temple', 'Handwrafts in national conomy',

Prof. Rambruhna Ayyar has vividly placed the problem of small industries in India against the whole background of our national economy. He has fairly seel analysed the technical and business aspects of different small industries and has shown the vorticus factors that powers the optimum units is such industries. His arguments regarding the maintenance of small industries in planned industriatation in soit was India are really reflexible and scoriby of permad.

HE problem of small industries in India is to be considered against the whole background of national economy and not merely as a comparison between small scale and large scale industrial structures. Small scale industries in India are both economically important in the present and capable of affording an improving livelihood to large numbers of people in the future. It may be first of all worthwhile to mention one or two general considerations that support this view.

Any sudden or revolutionary change in the economic organisation of a community involves social dislocation and the suffering caused by this may for a long time outweigh the economic gains of the reorganisation. The experience of Great Britain in the period in which modern industry was established amply illustrates this: In India the effects of large-scale factory employment are likely to be even greater because the change involved is greater. The way a man lives is intimately related to the way he makes a living; the form that family life takes is dependent on the forms that property rights and employment systems take; an established economic system exercises a moral as well as an economic control over the individuals within it. It is important, therefore, if even the most necessary economic reorganisation is not to cause misery, to study all its effects and to control the transition, even delaying it if necessary, from one economic phase to the next. It is very necessary to emphasise the wider social effects of economic change, since the protective policy hitherto adopted has tended to accelerate the development of factory industry without any regard to its secondary effects.

In one of its aspects the change from small scale to large scale enterprise is a change from rural to urban conditions. It is easier to provide education and regulate industrial conditions for an urban population; but it is also much more expensive. Moreover. rural conditions are better understood and the population knows how to adapt itself to them, since the vast majority have always lived under them. Now rural depopulation is not peculiar to India; it is a tendency noticed in practically every country that has population statistics. It is due to two causes, neither of which is itself bad; the growing efficiency of agricultural operations which makes it possible to feed the world's population with less and less labour and to the growing separation of industrial and agricultural work. The second of these is a cause of rural depopulation, because the industries that used to be carried on in connection with agricultural work textiles, agriculturai implement making, milling etc. - are now more and more concentrated in towns. The combination of part-time industrial work with agriculture still survives in most countries. In India it is possible that small industries could be made so efficient as to survive in competition with urban largescale industries. Such a possibility is worth exploring since the preservation of such industries would reinforce agriculture and preserve the rural community to which the population is accustomed.

A further consideration is that the urbanised agriculturist in large scale industry is usually rather

a helpless person. Modern industry affords a relatively high standard of life to the skilled and educated wage-earners of Western Europe and America who can organise effective trade unions and, being enfranchised, can command the protectici of the state. Its effect on the workers is very different, when these safeguards are lacking.

There must be very few observers of the results of rapid industrialisation in western countries who would not wish, if they had the power to start afresh, to plan it differently and especially to plan it in a way which would avoid huge urban concentrations and leave more open spaces so as to allow all factory workers the chance of keeping In touch with the country and even perhaps devoting part of their time and energy to cultivating the soil. The gradual change-over to the use of electricity for the supply not only of motive power but also for certain manufacturing and metallurgical processes and the resulting construction of central stations on a large scale have made the dispersion of factories much more possible than was the case when the Industrial Revolution transformed the face of England and other western countries.

There has always been considerable developments in regard to distribution of electric current for small industries. As Sir Willam Stamp observes in his paper to the East India Association (1938), "turning to the field of minor industrial development, I would quote the instance of the expansion of the brass turning and polishing industry in Moradabad and other towns in the United Provinces as a result of the availability of cheap grld power. Scores of small factories have been electrified and are producing brassware at cheaper rates than were possible under the old manual system, thereby ensuring a greater field of demand and a large scale for employment. In the flour-milling industry, especially in the vicinity of large towns, flour which was formerly ground by the cottage handmill is now being electrically treated and the labour thus released, largly that of women, is being profitably employed in cutting grass, weeding and other relatively more useful directions."

In the Punjab and Madras where electric grid systems are now in successful operation cotton spinning and weaving mills, both large and small as well as cottage hoslery plants are rapidly being connected.

The relation between the cottage Industries and small scale industries is partly one of competition and partly one of co-operation. In regard to handweaving, small power looms are already appearing as a serious competitor and the same competition is to be found in regard to other kinds of production. Factory-made solt, Iron furniture, factory-made soaps, mill-pressed oil, mill-husked rice etc., are superseding cottage products. This is inevitable in view of the fact that many of these small power industries have the quality of superior efficiency and the additional advantage of employing a large number of persons per unit of output than the cottage industries. Further the number of cottage industrial

workers affected by competition of small scale industries is not large, if we exclude the textile industry, which has to be treated as a special case.

The small manufacturers, merchants and shopkeepers who are found in the large and small towns as well as in the villages make up a group which is hostile to the large financiers, merchants and industrialists on whom they are often dependent or with whose enterprises they are in hopeless competition, Of the number in manufacturing industry, a very large portion are in work-places with under 50 persons and to the number engaged in small scale manufacturing trades should be added many other persons who are working in little shops where goods are made as well as sold. Measured in output, the importance of these small industries is less than would appear from the proportion of total employment which they afford. Some of the workers are intermittently employed in their trades. There is much under-employment in the little shops, and in most of them labour is less effectively used than in the large factories. Still, with all these qualifications, one can conclude that the major part of India's manufacturing is still conducted in very small work-places,

These small industries are of very different types. First, there are the trades which satisfy the everyday needs of the people. In India, westernization has not yet destroyed the traditional habits of consumption. There are many goods not of a kind that can be produced by mechanical methods in large factories. Everywhere there are small manufacturers turning out simpler kinds of durable consumers' goods for local sale.

The importance of the small unit in these manufacturing industries is explained not so much by technical reasons but rather by the abundance of labour and the scarcity and narrow diffusion of capital in present-day India. The pressure on the labour market caused by agriculture is so great that there is nothing in the nature of standard rates of pay. The small work-places are staffed by members of a family who work for long hours for very low returns and by very cheen labour from the country.

It does not pay an enterprenuer to risk capital in setting up a factory when he can obtain his supplies so cheaply from numerous small dependent suppliers. Most of these small scale industries are engaged in the production of finished consumption goods and their organization stands in marked contrast to that found in the heavy industries. In countries in which labour is relatively dear, employers are compelled to see that the worker's time is used in the most efficient way that can be devised, and in order to raise output per bead they adopt elaborate devices which can be employed only in the factory. But in India where labour is very cheap, employers are under no such compulsion in many trades. There is, moreover, a vast amount of parttime labour available in India. The quality of some of the domestically produced goods may be lower than that of those produced in large factories. But it is

high enough for the markets to which they are sent.

Mass production is less prevalent in India owing to intenees both on demand and supply side; many kinds of goods in demand in India are not stundard-leed enough to lend themselves to large scale production; on the side of supply, the fundamenal influence is the abundance of labour and the scarcity of capital compared with western industrial countries. The optimum technical unit in production depends on the relations between the prices of the factors of production, and that is because these price relations are markedly different in India from what they are in industrial countries.

Technical units of small size in any industry may of course be quite compatible with large scale control. For example, in Japan, many of the Japanese shop-owners are working under the orders of merchant employers or factory proprietors who furnish them not only with orders and detailed instructions but also with financial assistance and technical advice and often with materials and tools. Thus a small unit, though formally independent, may be virtually a part of a large firm from a financial and administrative standpoint. Where this is so, the activities of many plants can be conducted by a large organization and so can share in the economies that attend large-scale buying, marketing and financing. In this way the predominance of the small technical unit in many industries may be regarded not as an indication of the economic weakness of the country but as representing an appropriate adaptation of industrial methods to the economic conditions existing there. The side of the technical unit (or plant) in India is, therefore, bound under existing economic conditions to be far smaller than that found in corresponding industries in western countries and yet attain a level of efficiency which permits their survival in modern industrial conditions.

The amount of capital invested in the several scores of businesses included in the general term "small industries" runs into crores of rupees, even though individual units may be financed by no more than a few thousand rupees. The total number of persons engaged in these types of employment runs into militons. As there are no reliable statistics at present, it is quite difficult to assess more closely the financial structure of numerical basis of the variety of small enterprises scattered all over the country.

Since the majority of small industries are conducted not as registered companies or limited concerns, but as private family concerns, it is out of the
question to find out how much money is Invested in
them. In a country where there are thousands of
petty businesses, each of which employs less than a
score of workers, and, therefore, does not come within
the scope of the Factories Act (which defines a
factory "as a place wherein twenty or more persons
are engaged in industrial labour") there is no basis
on which we can hope to compute the number of
persons engaged in small industries. Further, there
is no hard and fast line of demarcation between a
small industry and a major industry. In this matter

we must arbitrarily define what we consider to be major industries such as textiles, iron and steel, sugar, cement, railways and the like and take all the rest as being within the category of small industries. Even within a particular industry, certain units are so large that they could hardly be called 'small industry'; yet others are run on almost on a one-man basis which are certainly small industries. For instance, a printing press which employs thousands of hands is a major industry. Yet there are hundreds of presses operating on the 'two-men and a boy' principle. The same applies to soap factories of which there are haif a dozen big firms and indefinite number of petty concerns. It is clear, therefore, that the line of division between small and large industries is difficult to be defined and statistics of personnel, capital and profits must at best be tentative.

We may classify broadly, though somewhat arbitrarily, the variety of enterprises. The main heads of small industries in India are:—

- (1) Chemical and tollet industries Pharmaceutical and medical products including patent medicines and drugs; scaps; perfumes, pomades and hair oils; link; fireworks; shoe polish; chemical manures; glassware and riass bangles; ass mantles.
- (2) Engineering and woodwork Metal foundaries; machine spare parts; coach building and motor car repairing; bicycles, tricycles and perambulators; aluminium hollowware; enamelware; brassware; and bell metal; tin bores and metal containers; metal stamping and printing; wire and nails, pins and needles; expanded metal and steel shutters; cutlery, surgical instruments, razor blades; electrical equipment including bulbs, ceiting fans, torchlight cases, dry cells and batteries; locks, clocks, umbrellas; bakelite products; fountain pens; saw mills, wooden furniture and household equipment; bobbins, pulleys etc.; penelis; toys.
- (3) Small scale textile industries Handlooms (cotton silk and wooi); hosiery; braid tape and shoe cases and the like; boots and shoes.
- (4) Leather industries Tanneries; chrome leather uppers and ealves; travelling trunks, attache cases and the like; boots and shoes.
- (5) Oil mills and vegetable products—Vegetable ghee; general oil presses; oilcakes and manure.
- (6) Food, drink and tobacco—Bottled and eanned branded articles; bakeries, biscuits and confectionary; lee and aerated waters; dairy produce; tobacco and cigarette manufacture.
- (7) Miscellaneous—small scale printing presses; pottery and tiles; canvas shoes with rubber soles; retreading and vulcanising motor car tyres; rubber tyres for bleydes and ears; real gold thread for sarees; carbon papers, typewriter ribbons, office equipment etc.

Having classified the bulk of small industries in India under certain main heads, we may proceed to deal in a general way with the trend of industrial development and economic conditions since 1920 and

then consider the position of specific branches of industry to-day with a view to determine their place in a planned industrialisation. The small industries set up and developed in this country before 1920 had to meet the overseas competitors who had turned their industrial equipment back from armaments to peace time products and were anxious to purchase Indian raw materials and foodstuffs by selling in exchange their own manufactures. It was intensified by Japanese enterprise, determined to retain the footing it had gained during the last great war and anxious to enlarge it as much as possible. That indigenous industries were not entirely swamped by the wave of overseas competition was due to two or three factors. First, in the case of several major industries (which are outside the scope of this article) the State undertook inquiries into the incidence of competition and granted in some cases a measure of protection. Not many minor industries derived assistance from this source. The most important influence which helped to keep the indigenous industries going during the trying years from 1920 onwards was undoubtedly the swadeshi movement. The slogan Buy Indian goods' had powerful psychological effect and helped to create a demand for iocal articles, even if they were inferior in quality and higher in price than imported articles. At the same time the country's natural demand expressed in terms of its purchasing power remained healthy during the greater part of the decade from 1920 onwards and underwent a sharp decline when the great slump undermined world trade and knocked the bottom out of commodity and raw material prices on which the Indian agriculturist is so dependent. So the sustained consumer's demand plus the artificial stimulus supplied by the swadeshi movement helped our small industries to keep going. But from 1920 onwards it is impossible to assert that the condition of small industries has showed a steady general improvement. Conditions have varied from one industry to another, and while some may have managed to go ahead and secure a reasonable return on capital, many others have remained in the doldrums. Certain general factors which have affected the trend of things are the trade slump, the urge for self-sufficiency among European nations which has restricted the channels of world trade, causing the nations concerned to concentrate on selling manufactured articles and producing their own foodstuffs, and the chaos in international exchanges. The trade depression caused the greatest damage to those forms of enterprise which were unorganised, had meagre financial resources, and had not accumulated sufficlent reserves and lived on a day-to-day or hand-tomouth basis. They, therefore, bore the full blast of economic adversity, for many units were blown out of existence. The prevailing unemployment in the country to-day is partly a reflection of these developments. Families and partnerships which had invested their all in a particular branch of industry too often found that not only could they not live on the procceds, but even that they were accumulating losses. The casualities of the slump in India were numerous and, in the case of our small industries, the incidence of Japanese competition has remained heavy in res-

pect of many articles. Since 1932 there have been numerous requests made to the State to render assistance to this or that small industry which has been feeling the pinch of foreign competitors.

As regards the small industries classified above, a certain number of them have never been subject to foreign competition, because they are either essentially local in the sense that they depend upon orders which must be carried out on the spot or cater to traditional Indian demands for a local product. An example of the first type is small scale printing presses which do not have anything to fear from foreign competition. An example of the second type is Avurvedic medicines, herbs and drugs which must necessarily be manufactured in India to comply with the requirements of customers. Of the seven main heads of industries under "oil mills and vegetable products", we have vegetable gice (usually manufactured on a large scale), oil presses (of which tens of thousands are scattered up and down the land in almost every village), and oli cakes and manure these enterprises are not subject to foreign competition.

Another group Food, drink and tobacco' includes bottled and canned branded articles; bakeries, biscuits and confectionery; lee and aerated waters; dairy products; tobacco and cigarette manufacture. Most Indian bottled and canned branded articles are typically indigenous, such as chutneys, condiments and fruits etc. Bakeries and biscuits are essentially local, for and aerated waters again are esentially local, but dairy produce (butter, cheese etc.) has to meet the challenge of the Imported product, usually from Australia and New Zeland. As to tobacco and eigarettes, India has the advantage of cheap local supplies of raw material, and apart from large scale enterprises is able to produce a variety of popular brands catering to the loss discriminating publie.

As regards small scale textiles, the handloom industry (including cotton, silk and wool) is by far the oldest and bilggest of India's industries. The importance of the industry can be measured from the fact that there are approximately two million handlooms in India and not less than five million people being actively employed in the industry, while in the immediate pre-war years hand-woven goods constituted a third to a fourth of the total cloth supply in India. The profit margin of the handloom weaver has progressively narrowed owing to increasing competition of mill-made cloth.

The Government of India have done something to assist the handloom industry by an annual grant to be distributed among the provinces for the promotion of handloom weaving. The Khadl campaign of small textiles which has suffered from extrement of small textiles which has suffered from extrementation. The same may be said to apply to such products as braid, tape, shoe laces and embroidery. In saree borders, the local article is preferred by Indian women and still holds the field. Tanneries in which the raw hides and skins are treated supplie material on which icather industries depend.

There is an increasing demand for Indian chrome leather. As to leather products, travelling trunks, attache cases, boots, shoes, they are made to compete in price with imported articles made of genuine leather but not with the articles made of artificial leather, and substitute fabrics. Fibre suit cases, canvas shoes, and rubber products have to some extent supplanted leather goods. Even cardboard with a thin cover of fibre has a ready sale in the shoddy market. The development of similar synthetic products in India is necessary.

The bulk of Indian small industries included under the two heads "chemical and toilet industrics" and "engineering and woodwork" comprise most of our manufactured articles and, in respect of these, the incidence of Japanese competition has been most severe. At present, in the case of small industries such official control and encouragement as exist are organised on a purely provincial basis. Each province has its own Department of Industries which is responsible for the supervision of industrial progress within the province, while the Central Government Department of Commerce and Industries occasionally takes only such action of an ali-India nature as seems desirable to protect the interests of an industry as a whole. Most of our information regarding small industries must be gleaned from provincial sources. As conditions differ widely from one province to another, depending upon the degree of industrialisation to which a particular province has attained, a considerable amount of caution must be exercised in assessing the condition of an industry throughout the country.

A broad generalisation that can be made is that the two most progressive provinces from an industrial point of view are Bombay and Bengal. In Bombay, outside the capital city, economic conditions appear to have been more conductive to embarking upon local enterprises, with the result that a number of minor industries have been set up in smaller centres; also the average inhabitant of Bombay apears to have a greater commercial bias. Bengal has a host of small industries which compete successfully with those of other provinces. Among the other provinces, the United Province, the Punjab and Madras may be regarded as being in the second rank of industrial development.

Any attempt to assess the future position of these small industries raises the all-important question of how to plan their further development. In a basically agricultural country like India, development calls for that kind of co-ordination which will maintain a fair equation between agriculture and industry, and as between large scale and small scale industries, the latter have an equal, if not a higher, priority in any scheme of planned industrialisation in India. It is gratifying to note that this aspect has been recognised to some extent in all the recent plans, official and non-official, relating to a planned economy for India.

In any scheme of planning, industries should be organised in such a way that over a whole planning period the ratio of capital, including land and buildings, to not product would not be too high in view of the plentiful labour and comparitively less capital in India. In the production of consumption goods small scale industries which require a comparatively small amount of capital equipment would play an important part. One lesson we have to learn from the Russian Five Year Plans is that while developing certain basic industries, it should be our aim to develop the comsumption goods industries so as to meet our essential requirements and we should encourage smaller industrial units. Further economic planning, as can be seen from the economic programme of Soviet Russia, should be a calculated effort on the part of the public authorities to secure within a given period of time the maximum well-being for the community by the most economical allocation of the available resources. It will, therefore, be found necessary to collect full information about the resources available within the country without which no scheme of planning can be launched,

The other important pre-requisite is that we should put before the country some definite ideas regarding the practical lines of planning, which will double the national income and the output within a specified period of, say, 10 or 15 years. A ten year plan for the whole of India and, a five year plan for the provinces are estimated by Sir M. Visvesvaraya to cost a capital expenditure of Rs. 500 crores, and a recurrent expenditure of Rs. 10 crores annually. The recurrent expenditure will, of course, be met by budget grants and 2 crores may be annually provided by the Central Government and the remaining 8 crores by the provinces.

In India it is well to bear in mind that the conditions in the different provinces are so diverse that it may sometimes be difficult to secure benefits to all areas at the same pace. A successful plan involves unified action by a central authority, and in this respect, the existence of autonomous provinces makes it difficult to administer an Ali-India plan, and such constitutional difficulties are likely to limit considerably the scope of a planned economy in India.

In the post-war period India may be expected to develop the lighter manufacturing industries, especially those which can achieve technical efficiency on quite a small scale. The most serious handicap to the expansion of small scale industries is the absence of technical assistance and expert advice. The efforts of provincial governments in the industrial field have been so far largely one of laisser-faire and in the case of most small industries which are largly a provincial concern, the provincial governments should realise that planning is no longer a faith but a technique. For instance, in the case of certain provinces e. g. Bombay, the province can be made self-supporting in regard to cotton textiles, leather and

leatherware, forest products and fisheries. There is also need for tackling general problems connected with transport facilities, health conditions and literacy which determine the limits of industrialisation. The first thing is the creation of an Economic Development Department under whose aegis would be conducted economic surveys of resources in each province. The census of small industries might aim at getting statistical information regarding (1) the number of persons engaged in these industries dis-

tinguishing workers on their own account, employers, employees, (2) the quantity and value of raw material used, (3) the quantity and value of inished products, (4) the quantity and value of products sold, (5) total wages paid to employees and (6) hours of work of employees. For the formulation of a positive industrial policy, the Board of Economic Development should draw up a time-table of industrialization based on the details collected by an industrial census of each province.

# NATIONAL ELECTRICAL PLANNING

#### M. SUBRAMANIAN

M. Subramanian, B.E., M.I.C., Madras, Electrical Expert, was some time Electrical Expert to the Government of Madras.

Mr. M. Subramamon has visualized the practical possibilities of a nation-wide Electrical Grid to substitute and supplement the present few and scattered tiny units. It is analogy to U. S. A. and Russia is not significant in view of the almost incomparable geographical advantages which India has for a vast development of hydro-electric power. Such development would be a panaeca for many of our economo vits, particularly when we want to maintain our pre-eminent agricultural character and village industrialism to a large extent in our planned national economy. In the most simple and non technical manner, Mr. Subramamian has shown conclusively why and how a planned electrical industry should be introduced despite the opparent until rais and express.

ATIONAL planning of Electricity does not merely imply its technical aspects, its spectacular beauty nor its utility to feed state exchequers. It does not solely depend on the number of power schemes and how far each is remunerative, nor on some commercial formulae. It essentially aims at perfecting ways and means to use all available power resources and supplies, to realise in full the potential assets of the nation and to stablise solidly its iffe, its social structures and its economics both in times of peace and in times of wars.

Plecemeal developments of Individual schemes or loads, either as tempting commercial undertakings, in times of peace or as emergency war measures, at the eleventh hour, merely result in a medley; they are time-serving and handicap later developments. Even as state schemes, the practice of treating Electical Developments, mainly as remunerative undertakings, tend to make all schemes short-termed and often short-sighted. In the sole analety to adjust budgets, no credit is ever given to social values or to national gains, which are not in coins.

In many areas, electrical networks shoot out like footpaths. Certain lines are initially laid to some isolated factories or towns to feed their immediate needs and fater on, other loads get located along that line, either by themselves or through canvassing. Whether such developments are suitable to national planning of Industries or not is not considered. The cart goes before the horse.

Some years back, every one in a town used to build factories where he liked and tortuous roads

were laid, along the routes of old footpaths, without any programme. Now we have the town-planning experts, who prescribe industrial limits, building sites and so on. No such move on a national scale to control sclentifically the locations of industries, with due correlation to transportation systems, to national, social and economic requirements and to electrical grids, has yet taken any shape.

National planning of Electricity visualises a team of highly organised, beautifully synchronised and thoughtfully correlated groups of national activities, all working unitedly and full-heartedly for utilising the full resources of potential power possibilities, "to increase the volume of India's economic production to the fullest extent, which its natural resources would allow".

These groups, which have to work together, do not merely consist of engineering, but need the trained services of scientists, Industrialists, economists, educationalists, investors, chemists, publicity organisations and, most important of all, dreamers with fertile imagination. Let none scoff at dreamers; the greatest inspirers of mighty movements have been dreamers.

#### POWER DEVELOPMENTS:

#### Comparison with Foreign Countries

India is next only to Canada and U. S. A. in her hydro-electrical possibilities; estimates of experts vary from 10 to 27 million K.W. as possible developments. Out of this, only under half a million K.W. have so far been developed by Hydro-Electricity all over India and about 0.45 million K.W. by other ther-

mal stations. Even this development is mainly locater in five Provinces and one native State.

The following figures from Garcke's 'Manual of. Electrical Undertakings,' for 1940-41 will be of interest.

Province or State		Generating capacity-K. W.			
		Hydro.	oit.	Steam.	Total.
Bombay Bengal Madras U. P. Punjab Mysore Ali the other Provinces and States		187,124 1,200 92,750 13,350 50,275 62,200 26,233	6.406 1.625 5,952 730 900 400	71,500 150,000 49,000 76,540 28,620 2,500 36,885	265,030 152,826 147,702 90,670 79,795 65,100 86,349
Total in India	•••	433,132	39,295	415,045	537,472

Great Britain, with one-tenth the population of India, had before the war over 9 Million K. W. installed and 3 more million K. W. are now planned. London alone had in 1938, in its six Generating Stations, an installed capacity of 0.9 million K. W. more than the whole of India put together!

Russia had a generating capacity of only 1.2 milline. W. in 1925. When she discovered that this development was miserably landequate to launch any national plans of economic developments she immediately embarked on rapid electrification and by 1935, she had developed 7 million K. W.

The Government of India are visualling the possibility of certain immediate post-war developments; but it is understood that they only total about 0.7 million K. W. so far. We have still a very long way to go, if India is really to be progressive, in her electrical developments.

Exact particulars of possibilities in the various Provinces and States are not available; in many centres they have yet to be worked out. But from press reports from time to time, it is seen that the figure of 0.7 million K. W., as immediate future developments, is really on the low side and actuals can be greater, provided the schemes in view are enthusiastically and energetically pursued and developed.

#### Some Projected Schemes In Indla

I have no means at present, of determining the exact possibilities of future development in India; but certain possibilities, already considered, can be mentioned and an idea formed. The following are some of the hydro-electrical schemes visualised.

In Madras, schemes for extensions to the Metur, pkara, Papanasam and Bezwada are being worked out at Perlyar, Kolab and Machkand, Tungabhadra, Palni hills and Moyar. Exact figures of possible demands, which can be developed with a full national economic development of loads, are not available; but a rough estimate of possible developments in the near future in the Madras Presidency is believed to be about 300,000 K.W. more, with a really progressive policy and plan.

The Punjab is capable of developing another 100,000 H. P. on the Uhi River and the N. W. F. can increase the Malakand output by 30,000 K. W. more. A very interesting scheme is recently reported from the Punjab, for the construction of a possibly highest dam in the world across the Chenab river and it is estimated that it can also generate over 200,000 K.W. of electrical nower.

In Bengal and Assam, large developments are considered possible at Cherrapunji and the Teesta river. The Ganges canal power plants in the United Provinces are said to be capable of developing a further 24,000 H.P.

In Bombay, a development of 200,000 K. W. is said to be possible in the Koyna Hydro-Electrical project. Nothing is known by me about future possibilities in the Sind and in the Central Provinces.

Coming to the States, Mysore is still strong and has several more schemes being worked out. Siva-samudram is capable of 27,000 H. P. more, two miles down the Cawery. Krishnarajasagar can get 46,000 H. P. continuous. The Mekadatu, 20 miles below Sivasamudram, can develop 8,500 H. P. while the mighty Jog falls, of the Sharavati river, with a discharge of 80,000 cusses over a natural drop of 830 ft. can be developed to any extent — not only to be utilised in Mysore, but also in the South Maharatta and Ceded Districts.

Hyderabad has several schemes, thoroughly investigated — in particular, the Godavari and Kaddam Schemes, Lower and Upper Krishna Schemes, lower and upper Majera Schemes, as also the Tungabadra, Penganga, Bhima, Purna, Manair and Dindi Schemes, a technical committee, which investigated the power resources in this State in 1941, reported a possible development of 500,000 K. W. in the near future and one million K. W. ultimately.

Travancere has a ten year plan to develop about 29,000 K. W., while the other various Native States are yet to rise up. Once they do, they should be able to develop, to their respective capacities.

To the above figures must be added the oil and steam stations, which also are absolutely necessary, as correlated features in national grid systems. In Bengal, large steam stations are always feasible because of the local availability of cheap coal. So also in the U.P. and Hyderabad. In Mysore, new thermal schemes are visualised at Madura, Hagari, Nellore and Panruti.

### THE NEED TO COMBINE HYDRO AND THERMAL SCHEMES

The capital charges of an hydro-electrical scheme high, whereas its running charges are lower. Further, owing to seasonal flow in rivers, it cannot take on its full load, except for a portion of the year. Thermal schemes have lesser fixed charges, but greater running charges. Fixation of the best all-the-year-round tariff, economical both to the power supplies and to industries, is found a problem, both

in a total hydro-electrical and in a total thermal Grid Scheme.

It is now realised that a scientific combination of hydro and thermal schemes, is most economical and it may be even possible to do away with double tariffs which are now indispensable, though the consumer rarely feels homely with them. A combination of hydro and thermal statiors, used in the Ganges Canal Power Scheme in the United Provinces, is said to be very sutsfactory.

Thus it will be seen that a heavy programme awaits for power developments and it is high time a concentrated move is made to have all the resources developed at once. As progress is made in the schemes in hand, fuller possibilities will be revealed. In any case, we are far from a reasonably ideal goal and should develop all possibilities — we cannot alm at the standard of Great Britain, on the basis of which we should have 120 million K. W. developed in this country; but we should aim at least at a modest 10 million K. W., as a reasonable ideal for the nature and requirements of India.

Provincialisation of electrical projects secludes various Provinces and States into water-tight compartments. Each State or Province limits its scheme to suit its individual purse and rigidly confines its designs and markets to its frontier survey stones. On this side of a survey stone may be several loads panting for supply which, atas, is only available on the other side of the stone. Even in cases where the two governments agree, the local designs are rarely suited for extensions or interlinking. Electrical systems are now, more or less, akin to the state of trunk roads. Before they came under a central control there used to be several types and standards of roads, as one drove along, with the worst portions in the no-man's lands where frontiers join.

A national power development demands the joint development of all resources, on a common design, for an All-India Grid, with the various States and Provinces as business partners of a common undertaking.

#### LOAD LOCATIONS

The ideal load locations should aim not only at prosperity, but also economic stability. While the out-turns during peace and plenty should be maximum, the sufferings during times of economic or political upheavals should be minimum. A national power development has to be useful both in times of peace and of war,

This war has brought prominently to light certain weak links in the present economic structures of countries, which necessitate a re-design of those structures, in future planning.

Particularly, transportation systems and organisations for distributions of essential commodities have been tensely strained and often have broken down tragically under war conditions, though they worked tolerably during times of peace. If this tragedy is not to be repeated in history, internal structures have to be reformed radically after this war.

Locations of loads should take this experience into cc-sideration.

Decentralisation of essential productions, e.g. food, clothing, etc. would not only minimise transportations and reduce costs in times of peace, but ensure that, in times of war, civic life is not throttled to the extent it is at present. This can be rendered possible only by an electrical rural Grid, feeding the villages.

To enable real rural developments and induce scientific uses of agricultural equipments, the owners have first to return to and permanently reside in their respective lands. They usually now immigrate since their average holdings are low and not sufficient for their needs. The average holding in India is 3 acres, compared to 26 acres in Britain and 140 acres in China. The tyots, who hold temporary leases or mortgages, cannot be expected to take any interest. The consequences are the low yields of lands, the large percentage of fallow lands and general famines during times of economic distress.

To attract land owners to return to their lands, additional employment and revenues during times of agricultural unemployment is essential, as also provision of ordinary modern comforts, e.g. lighting, water, roads, radio, etc., in villages. Rural electrifications are the only possibilities.

The tragedy of large scale unemployment, on demobilisation after the war, can be avoided by absorption of the enihusiastic youngsters, in their respective villages, into rural industries.

Possible uses of electrical power for cottage and rural industries are further considered later on in this article.

Large basic industries, which require heavy raw materials or demand standardisations, have to be located scientifically, with due reference to transportation schemes, the sites of raw materials and the electrical grid schemes.

It is a well-known fact, that the costilest and least remunerative item in an Electrical Grid is its transmission lines. The nearer the power users come to the power stations the greater will be the supply they can get and also others, down the line, can get for the same cost of the grid system. Proper distributions of loads will minimise waste of capital and line losses and enable cheaper tariffs and greater out-turns.

Large basic industries, which demand local heavy raw materials, have to remain near the centres of those materials.

Examples of these are:-

- (a) Miving and metalurgy:— iron and steel, aluminium, manganese,etc.
- (b) Chemicals:— heavy chemicals, fertilizers, dyes, plastics, pharmaceuticals, etc.
  - (c) Cement.
  - (d) Ship-bullding.

Other basic industries, for keeping up the industrial life of the nation as a whole, can be located as near power houses as possible, with due reference to transportation systems. Examples of these are.

- (a) Engineering:— machinery, machine tools, etc.
  - (b) Armaments.
- (c) Transport:— engines, wagons, automobiles, aircraft etc.
- (d) Consumer goods:— paper, implements, domestic appliances, vessels, furnitures, glass goods, stationery etc.

The above are only broad ideas; but the main fact is that an intelligent planning of load locations is essential. This question is bound up with the all-India policy of locations of different industries in the country.

Another great national development, rendered possible by an Electrical Grid, is electrical irrigation by lift pumping on a large scale For instance, there are hundreds of square miles of country, commenting from a high level down to where there are no water sources. On the other side of this peak level, there is plenty of water in a river or lake in the valley. If this water could be given a lift up to the high level, to would run from there by gravity and irrigate all the areas on the other side.

Even in canal systems, there are several locations where a canal butts against a hump in the levels and stops there. If the water could be coasted over this hump by electrical pumping, it would run on further, for hundreds of miles more, irrigating them.

Owing to the small holdings and frequent changes of ownership of lands, it is not always possible to get ryots to instal deep well pumps in these high levels. Irrigation is the natural and most stable system of water supply for the Indian ryot: where he cannot do this, either from shallow wells in his lands or from ririgation canals, he abandons those lands. 150 million acres of cultivable lands still lie waste and failow in India and only 270 million acres are under cultivation.

Except in the Punjab and Sind, the assistance given by irrigation systems to the ryot is minor. Out of 270 million acres cultivated, only 52 million acres are irrigated in India By a combination of electrical pumping and gravity channels, much can be done in this direction.

Emphasis has been given to this aspect, as it is a great potential asset, to increase the wealth of the nation, its agricultural out-turn, its standard of life and its economic stability.

#### RURAL ELECTRICAL INDUSTRIES

The principal objective of rural industries is to render village life attractive and paying during times of peace, and stable and self-contained during times of wars or economic upheavals.

Rural and cottage industries are best employed in the following cases:—

- (a) For the supply of local essential consumption goods, so that local life becomes stable and economical.
- (b) For rendering viliage life comfortable, civilised and attractive, to prevent emigrations and
- (c) To give the extra income sufficient to give a decent standard of living.

In certain cases, large basic industries may be started in some rural areas, for specific reasons. Such factories are not considered as cottage or rural industries, but as only basic ones.

As far as possible, only those rural industries need be launched for which raw materials are locally available and the products of which can either be absorbed locally or marketed within an easy range.

The average farmer in a village in India is desperately poor and his holdings are too tiny to justify individual machinery and equipments, unless they be small domestic appliances. Even if he happens to be well-to-do, his neighbours generally are too poor to give hlm a regular income, should he start an industry on a business line. The most efficient organisation for developing rural industries is the cooperative one, established on a solid stable basis. For instance, in the midst of several sugar cane fields crushers established on a co-operative basis will benefit everyone when individual ryots cannot afford a crusher each or to transport the huge plie of sugarcane to a town. It would be desirable for the State to assist actively in the formation of such co-operation ventures, on partnership or loan and hire basis. Other similar rurai factories on a co-operative basis will be rice mills, gins, decorticators, oil mills, presses etc. Such factories are primarily meant to help the farmer converting his raw produces into some finished shape fit for his consumption or easy

Dairy machinery can also be provided by the State or private enterprises and made available to the farmers for loan or hire. Some of these are pasteurizers, churners, cream-separators etc. Small size dairy machinery, for individual domestic uses, would also be possible and would find a good demand, provided they are cheap, easily maintained and spare parts are made available.

In spite of all the mills in India, the average millon yards of cloth before the war. Including hand-looms and imports, the consumption was only 6,250 million yards or 16 yards per capita. This is very inadequate for a decent standard of living. It cannot be that raw materials are insufficient, as nearly half the cotton crops, 1½ million bales out of 3 million, have been exported. There is thus a wide scope and need for all possible sources of spinning and weaving. By using small fractional H. P. motors, with suitably designed spindles and looms, this cottage industry can be made a very attractive

and remunerative rural one and complementary to

Other small local manufactures can be undertaken with local electrical workshops e.g. manufactures of better designs of country carts, domestic furnitures, house fittings etc.

We cannot detail all the cottage industries possible, but an idea has been given of the general lines on which such developments are most advantageous, both for the rural areas and for the nation.

Particular attention will have to be paid in postwas sehemes to the developments of rural electrical stations and a very carefully considered national plan has to be finalised, as to which industries should be developed on a local octage basis and which on a large industrial basis. Special steps will have to be taken to avoid overlapping and clashes. In the same area, the tragedy of large capitalist organisations crossing swords with cottage industries and killing one another must stop. The field of the cottage findustrialists and of the basic industrialists must be separate, clearly demarcated and encroachments avoided, by sultable marketing arrangements.

Future electrical rate structures have to provide for rapid building of rural roads and village factories; to enable this being done economically. standard designs for cheaper constructions of rural lines, with local materials must be evolved. It may be that the Engineer revolts at having to sacrifice his high technical ideals of lines and works. But the fact has to be faced that an electrical scheme is fundamentally intended, not as a model of technical perfection, but as an economic utility, a business concern and a servant of the consumer. Its value, therefore, depends more on its utility than on its beauty or dignity. The goal must be to develop supplies as much as possible, for a given outlay, consistent with minimum technical requirements of safety and efficiency.

#### MANUFACTURE OF ELECTRICAL GOODS

It is not of much use to the nation, developing her power sites and carrying out extensive grid schemes, unless the necessary materials and consumer goods for the constant maintenance of the systems and for the free and economic use of the supply by the average consumer are easily available within the country. Else it will merely end in an annual drain and an atmosphere of insecurity, during periods when imports are handicapped.

Even with her limited electrical developments, India was importing about Rs. 6 crores of electrical goods annually before the war. When her power resources are developed, as they ought to be, the colossal annual drain on this account can be imagined

The principal obstacles in the way of manufactures are lack of standardisations and lack of first-hand expert knowledge in starting such factories when materials are available in India,

Though schemes for electrical developments may be prepared by various agencies, it should be borne

clearly in mind that the ultimate purpose remains the same. Government schemes, local body schemes or private schemes are all intended for the consumption of a common master, the consumer. If every province or locality has its own standard, the consumer, who often moves from locality to locality, gets upset and does not take so freely to electrical affairs. Manufacturers of electrical goods would be seriously handicapped and possibly avoid that line of production. No one wants to buy a non-standard safety razor nor to start a factory to make blades for it.

A common organisation, embracing all supplies, users, manufacturers and designers, has to be brought linto active existence to determine the most economical standards and these standards must be rigidly adhered to. Standards have to be laid, not only for design details, like voltages and frequencies, but also for line construction details and for essential mechanical dimensions of interchangeable or renewable consumer goods, like bulbs, plugs etc.

Expert assistance from foreign specialists would be necessary in the initial stages and they should be got on suitable conditions. A body of young Indian Engineers must also go abroad and get trained in manufacture methods and to take over the reins gradually.

In 1930, Russia was importing most of its electrical goods from Germany, Switzerland, United States and other countries, Yet, in five years later, her manufactures had so far developed that she became self-contained and was able to manufacture even heavy machinery like large turbines and generators. Japan, Canada and Australia have also similarly developed their maunfactures. There is no reason why India should not.

The following are some of the electrical equipments which should be manufactured in India:—

- (a) Power House Plant: Turbines, generators, hydraulic equipments, etc.
  - (b) Conversion Plant: Motors, transformers, converters, rectifiers, etc.
  - (c) Control & Protection Gears: Circuit breakers, switches relays, lightning arresters, etc.
  - (d) Lighting Equipments: Bulbs, switches, interior wiring materials, lamp holders, etc.
  - (e) Small Appliances: Fans, heaters, cookers, furnaces, fractional H. P. motors, domestic dlary-plant, etc.
  - (f) Overhead Line Materials; Poles, towers cross-arms, guns and conductors.
  - (g) Batterles, Accumulators, Carbons, Drycells, etc.
  - (h) Radlo and Telephone Equipments of all types.
  - Electrical Wires and Cables, including underground cables, flexibles and control wires for all uses.

- Meters of all types: Portable and fixed types.
- (k) Porcelain and Glass Insulators and goods of other correlated equipments.

Equipments have to be made for various standard voitages etc., determined for use in the country and particularly for such consumer goods as principally build up supply demands. A graded programme of development may be desirable, ultimately leading to full local manufactures.

The present manufactures in this country are very few and more of an experimental nature. Even the largest of such ventures, the Indian Cable Co, meets only a fraction of its demands. Four small electrical bulb factories at Bombay, Agra, Caicutta and Bangalore: a tiny single phase transformer manufacturing venture and porcelain insulator factory in Mysore: and a telephone assembly factory at Calcutta, with most of the components imported, are about all there is now in this line: of Electrical Manufactures.

#### GENERAL

Large workshops would be necessary at important centres to repair electrical equipments to render services to consumers and to manufacture tools and plants. Research institutions to embody reforms and progress with the advent of experience (both in this country and a broad), would be essential, as also organisations and associations, where experts can freely and periodically meet and exchange iteas.

The need for private technical experts and services would also arise to guide businessmen in details. There are able private lawyers, accountants, doctors etc.; but in the field of Electrical Engineering there is a vold, though the need is none the less.

Organised systems of financing electrical schemes would require consideration. Assistance on a commercial credit basis to those who possess the capacity but not the means should go a long way to accelerate results.

The actual system of financing and controlling such national schemes has ever been a disputed subject, time to time and country to country. The initial history of the Tennesse Valley scheme would reveal how, even in a totally democratic country like U.S.A., lack of full-hearted public enthusiasm in a total State scheme and even hostillity from affected business, ciothed in political forms, hampered progress.

There is a limit to which you can tax or borrow and that limit prescribes how far national schemes financed by States can expand Public utilities and services have constantly and annually to fight each other, over a fixed limited purse, for their needs. If you get good water this year, you must put up with lesser education, health or roads. Long-term schemes are not always easy; nor is it so easy for the State to isolate business from politics.

At the same time, control by the State is essential, to ensure that developments are in the line of national interest and service. A system by which large private and even foreign capital could be attracted to be utilised for such national schemes under State control and proper safeguards would increase the wealth of the nation and make it possible to develop schemes of great magnitude beyond the capacity of a purely State undertaking.

The administration of this control by the State is best in the hands of a separate body of experts, with business acumen, with the backing of public confidence and unconnected with the regular services running the daily political administrations.

The sharing of unearned increments with the State is also a potential and rarely utilised national asset, to finance schemes. Broadly, this principle implies that everyone, whose capital assets increased owing to no efforts on his part, but to the advent of an utility, must share that unearned increment with that utility. If land values rise owing to the advent of an irrigation scheme or house values rise owing to an electrical scheme, a portion of such increases should go to those schemes. Taxations will be relieved and it would be possible to organise many utility schemes, without touching the poor man's purse. This is a wide subject, but mention is made to provoke thought; it can be pursued, only if the Administrator can get out froutine ideas and boddly launch on fresh reforms.

In preparing estimates for national electrical schemes, it is not enough to remember only the values of properties or departmental debits and credits. One has to keep an eye on the resulting effect on the purse of the nation, as a whole. On several occasions, an apparently costiler departmental scheme is cheaper, from a national point of view, since a portion of the cost will return as a revenue, to the nation, by another door.

Use of apparently costiler indigenous materials is ultimately more economical to the nation than cheaper imports; in the former case, there is merely a circulation within the country, whereas in the latter there is a drain out.

Similarly, in a locality where both hydro-electric and thermal power stations are feasible, it may be more economical, in certain cases, to the nation to develop the hydro-electric stations, though they happen to be costlier departmentally. The fuel, thus released, can always be sold out or used for other national industries and additional revenues derived; whereas the water saved by going in for thermal stations would run to waste.

In conclusion, I wish to emphasise that the views expressed in this article are only my personal beliefs, arrived at in the light of my long and close experience in the planning and working of Power Schemes and Grid Systems.

## PLANNING OF FILM INDUSTRY

#### G. RAMABRAHMAM

G. Ramabrohmam, Insiness Director and Proprietor of several Film Companies, South India, Sometime, Editor, 'Prajamithra', is of present, President, South Indian Film Chamber of Commerce, Madras.

In the article below, Mr. Ramabrahman has pointed out the importance of the Film as an net Industry from several stand points. Besides giving a healthy recreation, it can also act as a great educative and cultural force to renow inquarance and littleracy of the masses. Mr. Ramabrahman has resualised the growth and progress of the Industry on a national scale and has shown in a critical and radiculating manner have such development when planned can serve the varied important purposes of the country's development.

period in India. The word "Reconstruction" will be writ large on every effort. Resources of every kind will be pressed into service with which to build a new and great India. This unique endeavour will naturally comprehend within its scope the full utilisation of every Industry, Art and Craft.

Cinema is an Art-Industry; it has the power to recreate the bodies and souls of human beings. It can re-invigorate the spirits, exhausted by the exacting realities of life. It is an amenity, as important as a man's balanced diet, his clothing or his house room. And so, Cinematography needs to be planned, so that its potentialities may be harnessed for the reconstruction of the country.

To begin with the plan, it may be stated that every person, in order to keep a healthy mind in a healthy body requires 2½ to 3 hours of relaxation; and a visit to a picture house should afford at least this relaxation once in every 6 weeks.

The existing show-houses are either too small in number or too inadequate in up-keep to meet the needs of the people. Let us just note here the progress made in some foreign countries. In Great Hritain, they have 5,000 cinemas le, one for every 7,500 people. In America, there are 17,000 l.e., one for every 7,217 people. But in India we have about 2,000 ie, at the rate of one for about 2 lakhs of people.

Therefore, the first duty of the planners is to make chematic amenity available to all the population, both urban and rural. And so, it is suggested that there should be atleast one theatre for every arban station and one touring outfit for every 100 villages or 50,000 people.

We have 1,700 permanent theatres spread over about 575 urban stations, while there are still about 2,000 stations which require to be provided with theatres. In the same way, there are 300 touring sets now functioning in 300 rural centres, while there are yet about 6,49,700 villages which have to be brought within the easy reach of this amenity. At this rate, we require 10,200 cinemas 1. c., 3,700 permanent theatres and 6,500 sets.

It may be stated here that the success of this scheme largly depends on how it is being worked out in the rural areas where the vast population of India lives. As a matter of fact, motion picture is expected to play an important part in the general scheme of rural uplift. This fact has been revealed in the Government Report on Planning. Therefore, it is necessary to plan with a view to giving every person in any one of the 6½ lakhs of villages, an opportunity of enjoying this amenity.

Hence it is proposed that a touring cinema set should cater to a population of 100 villages, divided into 30 groups, each group consisting of three or four villages which are in neighbourhood of one another. The shows given in one group centre are meant not only for the inhabitants of that centre, but also those of the other three or four villages in the same group. A set is supposed to tour all the 30 group centres at the rate of one day per village centre (i.e., two shows per centre) in a period of 60 days, making due allowance for shifting of the camp to the next centre. The linerary of a set may be arranged to see that, as far as possible, every village forms a centre for cinema shows.

Let us take it that a group consists of villages A, B, C. The village A gets the turn of having the shows in its area on 1st January 1946 and again in July 1946 after an interval of 5 months. Thus every village not only gets the turn of being a centre twice in the course of a year but will also be within the reach of shows four more times during the same period. Apart from this, there will be at least 3 or 4 common or general centres in each circuit of 30 groups, so situated as to enable the inhabitants in the circuit to witness a picture 3 or 4 times, as the case may be.

It may be stated here that the centres of pictureshows may be arranged to correspond and co-ordinate with the viliage settlement group centres, as envisaged in the second Government Report on Post-War reconstruction.

The task of successfully running the touring outfits in rural areas is dependent on the general schemes connected with the supply of electricity and road and rail communications. We are given to understand that, among others, the development of electric power as the basis of industrial development and expansion of road and transport services in rural areas are the objectives of Government planning. Accordingly, it is expected the vast reserve electric energy (and it is about 26½ Million Kilo Watts) will be harmessed. Also a network of roads will be planned, so much so that no viliage with a population of 1000 or even less will be more than, say, ½ mile from a public road.

Now, let us estimate the cost of building new elnemas and renovating the existing ones. At the rate of Rs. 10,000'- per theatre and Rs. 5,000'- per set, the renovating charges of the existing 2,000 cinemas will come to Rs. 1,05,0000'-. Again, at the rate of Rs. 1 lakh per permanent theatre and at Rs. 15,000'- per outift, the building and equipping of 2,000 theatres and 6,200 sets will come to Rs. 29,30,00000'-

The annual recurring expenditure for 3,700 theatres and 6,500 sets, will amount to Rs. 16,68,00, 000/- at the rate of Rs. 2,000/- per theatre and Rs. 1,000/- per set.

Thus the total capital outlay on the einemas, will come to Rs. 31,15,00000/- and the recurring expenditure will work out at Rs. 16,68,00000/-.

#### PICTURE PROGRAMME

The primary object of a cinema show is to spread knowledge and to ensure enjoyment of life and cuttural well-being of the people. From this criterion, it is suggested that the picture programme should be purposeful, instructive and enlightening. Classified in its different items, a picture programme with consist of:

- A feature film of 11,000 feet or 14,000 feet as the case may be.
- Instructional "shorts" with a total footage of 2000.
- 3. A weekly news reel of 500 feet.

#### FEATURE FILMS

Let us estimate the number of feature films required for 10,300 einemas. Before arriving at a target, it is worth while considering the present average annual output.

The numbers of pictures produced since 1940 are as follows:

Year of production	No. of Pictures made	
1940	162	
1941	137	
1942	166	
1943	119	

The average per year comes to 153.

The proportionate output of pictures as per language in a year may be stated as follows:-

	Language	No	of Productions
ı.	Hinds or All-India		75
2.	South Indian language		46
3.	Rengali		20
4.	Marathi and Gujarathi		12
		70-4-1	100

Now assuming for the sake of convenience that the average annual output in India is 150, it is recommended that twice that number, i.e., 300 features, will meet the demands of the cinemas. This suggestion is made on the following ground:

Generally, the supply of films and their demand should, as far as possible, be proportionate to each other. It serves no purpose to produce a greater number of pictures than are actually demanded. It will result only in bottling up vast quantities of celluloid in godowns without any advantage whatsoever. And so, it is suggested that the annual output for any given year should be "fined" to a target. In other words, the planners have to take steps to see that there is neither over-production nor under-production. And it follows that every picture that is produced in a year, should be given all opportunities of exploitation without any let or hindrance. Judged from the above point of view, 300 feature films with a sufficient number of prints will be just enough for the purposes of this plan.

It must, however, be stated that the figure of 300 cannot be fixed once for all but will have to vary with increasing expansion on the exhibition side.

At any rate, taking for granted that we produce 300 pictures a year, let us allocate them as per production centres and language. The proportionate percentage of output may be struck at 44%, for Bombay and 55%, for all other centres put together. This proportion existed in 1941, which may be taken as a normal year of picture making.

Accordingly, the following estimate may be made of production output. The figures in the table may vary from time to time.

Allocation as per Province and Language:

	Lauguage	Madras	Bombay	Calcutta	Labore	Total
1.	Picture of Non-		15	25		110
	Hinds or non-	Tamil	Marathi	Bengalı	•••	110
	English langus	es Telugi	ı etc. Gujara	thi		
2.	Pictures of					
	Hindi language	10	112	45	8	175
3.	English	5	5	5	•••	15
	Grand Total	85	132	75	8	300

The above table provides for 175 Hindi or All-India films, 70 South Indian language (Tamil, Telugu, Kanarese and Malayalam); 40 North Indian language (Marathi, Gujarathi, Bengali, Punlabi etc.); and 15 English films. Out of 175 Hindi and 15 English films, South India will produce 10 Hindi and 5 English films,

No doubt, production of English films in India and Hindi films in South India is not an easy task. But it shall have to be accomplished if India desires to continue to trade in films. It was thirty years ago that we began making films and, though this trade has come to stay, its economic and cultural potentialities remain still to be exploited. It is high time that India commences its trade in films in foreign countries, as U.S.A., and United Kingdom do, because such a thing will tend to advance India's other trade interests.

There is still another reason why English films should be made in India. The advanced countries of the West and of the East know very little indeed of the heart and soul of India. They are often spoonfed on exaggerated notions and distorted versions of India's millions, so much so that the case of our country has in the past, gone by default in international matters. But we can ill-afford to let matters drift in this manner any longer. So, then, it is necessary to educate foreign folks aright about our country. And what can help better in this objective than a cinematograph (ilm? Indian-made films in the English language will certainly bring home to foreign peoples the glory that is India, besides conducing to carve out an enduring place for our trade in the fiim map of the world.

The proposal of scheduling English picture-making in India and Hindi film production in South India is a welcome proposition. But it bristles with practical difficulties, which the trade by itself may be able to surmount successfully. And here comes the need for Government aid. Initially, the Government should come forward and encourage these productions by affording the necessary facilities, subsidies and concessions to the intending and competent producers. Next, it will be their responsibility to take steps for adequate and successful exploitation of the picture in outside areas.

As for the cost of 300 feature films, we may estimate a sum of Rs. 645 lakhs, i.e., at the rate of Rs. 2 lakhs for each of 285 Indian language pictures and at Rs. 5j- lakhs for each of the 15 English language films.

The following is the table stating the number of prints required for full exploitation purposes, together with the cost:

Language and No. of Pictures	Total prints for each	Total prints reqd. for all for pretures	Prints read. or all pictures per year	Cost
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Handı	175	363	63515	15881	Rs. 11910750
S. Indian	70	56	3920	980	735000
N. Indian	40	38	1520	380	285000
English	35	200	3000	3000	2250000

The above table takes into account the requirement of prints for 2575 urban stations and 6500 rural circuits at a minimum of one week shows per cinema. The cost of the prints per year, is worked out over a period of four years which is generally considered the normal term of life for a picture.

#### WEEKLY "SHORTS"

Apart from features, the programme consists of instructional 'shorts' with 200 footages. This is an important item on which sufficient attention should be focussed. These instructional films are expected oserve as powerful media through which mass illiteracy could be liquidated and enlightenment could be brought home to the educated. This is a mission in which the leaders of thought and educationists should play their part along with the members of the Motlon Picture Industry.

For the sake of convenience, let us take it that two "shorts", each of 1000 footage, will be issued per week, i.e., 104 "shorts" per year. At the rate of Rs. 7500 per "short", the cost of 104 "shorts" will come to Rs. 7,80,000. The number of prints required for these "shorts" will be 42,432 costing Rs. 31,82,400 at the rate of Rs. 75/- per print.

#### WEEKLY NEWS REEL

As already stated, a weekly news reel, is the spice of the programme. This is a "short" of 500 feet containing outstanding and topical news from any corner of the world. At the rate of Rs. 4!- per foot of the news film collected, each news real will cost Rs. 2,000/-. But unlike the "shorts" the weekly news reel requires a greater number of prints (i.e., 132600 per 104 reels) so as to enable it to go round not only all the stations but also all the chemas expeditiously, lest otherwise the topical nature of the reel should be lost. It is estimated that the total cost of prints will come to Rs. 53,04,000 at the rate of Rs. 40 per print and the cost of the 52 reels to Rs. 1,04,000. STUDIOS

The production and processing of feature films, "shorts" and news reels will be made possible by equipping the studios and laboratories attached thereto on up-to-date lines. The cost of such equiping and renovating of 50 studios (the existing and new ones put together) will come to Rs. 250 lakhs at the rate of Rs. 5 lakhs per Studio.

#### DISTRIBUTION

The distribution machinery which is to be in charge of exploiting the product, will be efficiently organised and managed. Since the capital investment in this branch of the Industry is merged in the production cost of a picture, a separate estimate is superfluous. Again, as for the recurring expenditure on this branch, it is made up out of the 12½ to 15% commission realisable from the revenue of a picture, and so the working expenses need not be accounted for separately.

As for the topical "shorts" and weekly news reel, the task may be entrusted to a common agency, which believes in the theory of "less profit and more service". However, the cost of maintaining such a machinery is estimated at a sum of one lakh of rupees per annum.

#### GENERAL ADMINISTRATION

On the administration side, it is recommended that the first step to be undertaken should be the codification of all laws, regulations, taxation, rules etc., pertaining to the film trade and also formulation of trade practices, conventions, reforms etc. The drafting of the detailed and comprehensive scheme of these reforms can be taken up at an appropriate stage, when the general planning is decided upon. However, it is necessary to state some broad lines on which such reforms may be based.

- (1) Almost all the rules should be codified into one iaw, to be administered by one department called the Department of Cinematography. These departments, which will function at the centre, in the Provinces and States will be guided, in their policy and programme by the Film Councils or the Councils of Cinematography, consisting of the representatives of the Film Trade.
- (2) The rules will provide for enunciation of policy and programme to be implemented through the Department, for the guidance of the various institutions and bodies that may be brought into being, with reference to the cinematograph trade or business such as (1) The Film Bank of India and the Film Insurance Company, (2) The Film Institute or the Institute of Cinematography, (3) The Raw Cinematograph Film making Factory, (4) The Factory for manufacturing Cinematograph Machinery, (5) Factories for manufacturing other raw materials, such as chemicals, carbons, make-up-materials etc., intended for this Industry. The list is by no means complete or comprehensive.
- (3) The taxation policy of the Government in regard to the trade should be completely revised. The incidence of taxation on the gross income of the trade, should not exceed 15% as against 40% as in force to-day.
- (4) Another essential feature of the rules will be as how best to adopt the means and ways calculated to provide protection to our trade against foreign competition and unhealthy rivairies.

- (5) The rules will provide for taking such steps as will ensure the internal reform of the trade, to safeguard the well-being of the personnel or the workers engaged or dependent on film professions and to introduce and maintain a high standard of efficiency, sultability, speed and economy in the various branches, so as to enable the trade as a whole to meet the growling needs of the times.
- (6) In short, the rules will be conducive for securing (1) Public safety and convenience, (2) Public morale and cultural well-being, (3) Economic development and rise in the international status for India.

A word about the important institutions intended to implement the plan:

- (1) The Film Bank of India will subsidise and help genuine efforts at picture production and picture exhibition, at the lowest possible rates of interest.
- (2) The Institute of Cinematography will conduct research, study and training in film technique and art. It will standardise, through tests and examinations, all the technical professions in the Industry. The scheme under this Item will include the requisitioning of services of foreign experts to help in the operations of the Institute as well as the deputation of Indian students on studentships and scholarships to foreign technical Institutions for study and training.
- (3) The Raw Film Manufacturing factory is only to supply raw film for an industry in India (which requires a quantity or not less than 45 crores footage under this plan as against the 9 crores as at present consumed) but also to lead ultimately to exportation to the Far Eastern and the Middle East countries requiring the Cimematograph film.
- (4) The establishment of a factory for manufacturing machinery, equipment, spare parts etc., is another important necessity. But initial working of the Pian cannot await the proposed factory turning out sufficient quantities of required articles of standard quality. And so the machinery and equipment essentially necessary to initiate the scheme may be imported immediately. But, at the same time, necessary plants and expert personnel to work it may be obtained to establish a factory for the above purpose, so that it may ultimately free our trade from dependence on foreign imports. As in the case of raw film factory, the machinery factory will be conducted to create openings for our foreign trade.
- (5) Other factories (independent or subsidiary) which are intended to manufacture articles such as chemicals, carbons, make-up materials and other sundry articles, properties etc., are to be started along with other institutions.

#### CAPITAL OUTLAY

The following table states the estimates under various items of Capital Outlay:

	Rs.
Cost of renovating theatres	185,00,000
Cost of building and equipping new cinemas	2930,00,000
Cost of Studio Equipments	250,00,000
Film Bank of India	100,00,000
The Institute of Cinematography	8,00,000
Raw Cinematograph Film manufacturing Pactors	7 200,00,000
Machinery and equipment manufacturing Pactory	100,00,000
Miscellaneous	100,00,000
Ra.	3773,00,000

It may be mentioned that the State as well as individual initiative has to play an important part in meeting the items of capital expenditure. For instance, State subsidy and individual investment both share the burden under the items such as (1) The Film Bank of India, (2) The Institute of Cinematography, (3) Raw (Cinematograph) Film Factory, (4) Machinery Factory

In regard to the items of (1) renovating theatres, (2) building new cinemas and (3) equipping studios, investment thereon should be the responsibility of the Industry supported by Government subsidy,

#### RECURRING EXPENDITURE

The following table states the estimate under various items of annual recurring expenditure.

	Ps,
Cost of maintaining cinemas	16,68,00,000
Cost of feature films	6,45,00,000
	1,51,80,750
Cost of instructional "shorts" and p	rints 39,62,400
Cost of new reels & prints .	., 54,08,000
Cost of distribution work for instruct	ionat
"shorts" and news	zeels 1,00,000
Cost of maintaining institutes of cinema	tograph 2,00,000
Cast of maintaining raw film Pactor	ry 1,00,000
Cost of maintaining machinery facto	ries 1,00,000
Muscellaneous	10,00,000

Rs. 26,63,51,150

As regards recurring expenditure, the items of (1) maintaining cinemas and (2) production of feature films should be the responsibility of the trade, supported by loans from the Film Bank of India or subsidies of the States.

And as far as the items of (1) instructional 'shorts', (2) News reels, (3) Distribution machinery, (4) Maintenance of the Institute of Cinematography, Raw Film Factory and machinery factory, the recurring cost of these should be either borne by the State or met from subsidies in case of initial losses.

#### POSSIBILITIES OF INCOME

Let us now consider for a while the possible income of the trade to meet the estimated recurring expenditure of Rs. 27 crores.

India consists of about 40 crores of people. Let us take it that at least 30 crores of them are capable of seeing motion pictures. And if they visit cinemas

at least 8 times a year paying each an aggregate total admission fee of rupee one, the collections will come to Rs. 30 crores of rupees.

Also judging from the point of view of expanded that about Rs. 30 crores will be collected. The yearly gross income of the trade (during the year 1942-43) is Rs. 586 lakhs, which amount is realised from about 2000 cmemas. At this rate, the amount realisable from 10,200 chmemas (as per the plan) will easily come to Rs. 30 crores.

Thirdly, the rise in the income of the cinemas, will naturally follow from the general rise of income from the industries in the country. The present National income of India through industries is put down at Rs. 374 crores and it is estimated that this National income will increase six times, i.e., to Rs. 2240 crores. In the same way, the income from the motion pictures trade can also increase to the same proportion, i.e., the estimated income of our trade will rise from Rs. 588 lakhs to nearly Rs. 35 crores

It may be noted here that the estimate of possible income of at least Rs. 30 crores on this Industry, has not taken into account the income that can be realised from exploitation of our pictures outside our country and also from the savings that may be gained for the industry through State-aid and other resources.

#### OTHER RESOURCES FOR THE INDUSTRY

The scheme of visual education will go hand in haid with this plan. The scheme may be directed by the All India Film Council and implemented through the provincial educational bodies. Under the items of (1) Primary, (2) Secondary, (3) University, (4) Research systems of education and also of (5) Agricultural and (6) Health propaganda, we may estimate an annual expenditure of Rs. 3 crores. Out of this, the running cost of the Institute of Cinematography and the production and distribution cost of instructional and news reel films can be adjusted. And the remainder amount may be expended for making class room and health propaganda films.

As regards adult education, it forms an important item of visual education, which has to be debited to the State funds. The adult illiterates in our country number about 1650 lakhs and at the rate of Rs. 2 per head, we require Rs. 33 crores towards their visual education. This amount of Rs. 33 crores will fetch about 94000 sub-standard projectors, which can be installed at the rate of one projector for every 7 or 8 village schools. While serving the purpose of educating school children, these projectors can be used for teaching illiterate adults.

#### NEW DEVICE

While planning the development of film trade it is necessary to take note of the influence of the new scientific devices which are likely to have a bearing on motion pictures. The chief and outstanding of these influences is Television. It is often apprehended that Television will come to replace the

movie as an amenity. But it will not. From the facts available, it may be asserted that Televiside will better serve as a hand-maid of Cinematography. Televised pictures will become all the more popular it shown as a part of the picture programme rather than separately. No doubt, cinema theatres may require to be equipped with Television apparatus and may televise pictures as an additional attraction. But still, the sustaining capacity of these theatres consists in the fact that the chief and major portion of the programme shown can only be cinematograph films. Therefore, we may safely state that television will tend to enhance the value of the silver screen as a medium of knowledge-eum-instruction

The estimate of the cost of installation and maintenance of the televised screen may be deferred. It may, however, be stated that a good deal of investment in this respect should fall to the lot of the State-subsidy.

#### SUMMARY

Let me summarise the plan. It requires 10,200 einemus and the annual production of 300 features, 104 educational 'shorts' and 52 weekly news reels.

The Plan wants India to produce English films, and South India to produce Hindi films.

The Plan states that India's dependence on foreign imports are to be minimised and wants facilities for the trade to be self-sufficient.

The Plan envisages self-administration of the trade through the Ali India Film Council.

The Pian, in short, is designed to spread knowledge and ensure enjoyment of life and cultural activities.

But (and it is a big "But" indeed) the whole Pian depends on two conditions and they are:

(1) The initiative of a popular Government imbued with the zeal and capacity for appreciation of Ginematography as a medium of healthy progress of the people and (2) the preparedness of the Industry to undertake to reform itself from within,

And so, I appeal to the State to evince interest in this art-industry and to the trade to reciprocate that interest so that their common endeavour may together help to contribute towards the progressive reconstruction of India.

### COMMERCIAL BANKING

#### II S NAVANI

U. S. Navani B.A. B.Sc., (Econ.) (Lond.), Sometime Secretary, The Discount Bank of India Ltd., Bombau, is at present Assistant, Empire of India Lafe Assuronce Co., Ltd. Bombay.

Mr. Navana has made a penetrating analysis of the development of Joint Stock Banking during the last fire years. He has profusely supported his arguments and assertions by statistical data and voluable references. He has sounded a serious note of warning against the various weak, if not exactly dangerous, points in this phenomenol growth os is particularly to be marked in certain important aspects of commercial banking. In the end, he has pointedly drawn attention to the need and urgency of on extremely cautious policy and action, both on the part of the monagements concerned and the public at large.

THE War has wrought profound changes in the structure and working of Indian banks. These changes were particularly marked from 1942 to 1944 during which period India has witnessed the beginning of a second banking boom.

#### EMERGENCE OF NEW BANKS AND THEIR EXPANSION

The following table shows the Increase in the number of Scheduled Banks in India since 1939.

Vegr ended 1939 1940 1941 1942 1943 1944 (30 Sept.) 60 62 61 70

It will be noticed that since 1939, i.e. during the five war years, the increase in the number of Scheduled Banks has been 80% The progress of branch banking is seen from the following table:

Table No. 2. Number of offices. Year ended 1939, 1940, 1941, 1942, 1943, 1944, (30th) Sept. Imperial Bank 381 390 401 392 308 412 Exchange Banks 99 99 84 24 80 Other 101 Scheduled Ronte 798 857 954 954 1400 1747

1454 Thus the number of banking offices of all Scheduled Banks recorded an increase of over 70% during these years The peak year was the year 1943 during which as many as 432 new banking offices

1450 1882 2239

Bank of India Ltd.

Bank of Baroda Ltd.

were opened by the Scheduled Banks. During the first three quarters of 1944 as many as 325 new ones were added. The increase has not come to a stop, but is proceeding apace. Although the old established banks, such as the Central Bank of India Ltd., the Punjab National Bank Ltd., and others also increased their number of branches, the most remarkable expansion in branches was witnessed in the case of newly started banks.

Below are figures of some of the Important newly established banks.

Table	NT-	2

Bank.	Year of Establishment.	Numb	er of Branches
Bherat	1942	119	(31-13-1944)
Bank of Jaipur	1943	15	(31-12-1944)
Exchange Bauk of India and Afric	m. 1942	15	(81-12-1944)
Hudostan Commer	ical 1943	46	(31-12-1944)
United Commerical	1943	24	(31-12-1944)

Of the old established banks, the highest increase was achieved by the Central Bank of India Ltd., which increased its branches from 114 in 1939 to 260 in 1944. Next comes the Punjab National Bank Ltd. which increased from 66 to 119. The Imperial Bank of India Ltd. increased its branches by 31 during these years. The Bank of India Ltd. and the Bank of Baroda Ltd. show a comparatively small growth. The figures for them are

Labie	wo.	4.	
1939			1944
20			25
94			90

The figures of capitalization display an equally astounding change in our banking structure. From

1278

1248

the following figures it will be noticed that the paidup capital of banks has more than doubled during the last five years.

Banks having paid-up capital and reserves of Rs. 5 lakhs and over (excluding the Imperial Bank and Exchange Banks) are given below:

Table No. 5. (In lakhs of rupees).

	No. of reporting Banks	Paid up Capital	Reserves.
91-12-1938	(43	749	566
1939	51	826	531
1940	58	909	557
11941	63	1013	C06
11942	69	1261	Gt1
11 11 1943	92	1867	781

While the paid-up capital of banks having capital and reserves of Rs. 5 lakhs and over has gone up by 125%, the reserves increased only by 47% during this period. The progress in capitalization indicates that new banks floated during the period have been highly capitalized. For the year 1943, the peak year of the boom, we find that the increase in capitalization was of the order of Rs. 6 crores and an increase in the number of reporting banks 23, which gives an average paid-up capital of nearly Rs. 25 lakhs per new bank. This is indeed remarkable. The high capitalization is particularly noticeable in the case of some mammoth undertakings such as the Bharat (2 crores), the Bank of Jaipur (50 lakhs), the Habib Bank and the Hind Bank (each 50 lakhs).

The position regarding the Non-scheduled Banks with capital and reserves of one takh and over is as follows:—

	Table No 6					
Number of banking	1937	1940	1941	1942	1749	
Offices.	477	57.3	717	898	1161	

From 1939 to 1941, these banks recorded an increase of 50%. From 1939 to 1943, the increase is nearly 300%. This phenomenal increase in small banks is highly significant as the vast majority of them operate all over the country, particularly in places where the large and scheduled Banks have not penetrated. Their paid-up capital and reserves are as follows:—

Table No. 7

	Banks	with paid-up	capital and	teserves	between	1	lakh
and	5 lakha	in lakhs of r	ttpees).				
	1939	1910	1941	1912	1943.		
	2,82	2.44	2.56	4,71	5,17		

It will be observed that between 1939 and 1943 the capital and reserves of these banks have increased by over 36%.

#### EXPANSION IN DEPOSITS

Nothing illustrates better the boom in Indian banking than the phenomenal rise in deposits of all banks

#### DEPOSITS IN LAKHS OF RUPEES

#### Table No. 8.

Year ended	1933	1939	1940	1941	1912	1943	1914 29thDec-
Imperial Bank Exchange Banks,	8151 6720	8784 7409	19603 8533	10892	16316	21453 14019 \	22459
Other Schedu'ed Banks. Von-scheduled	9187	9374	10010	12904	19934	31965	59442
Banks with espi-							(12-7-41)
of I lak hand over	1.604	1030	10(1)	2004	0001	40.00	(12-1-61)

handover, 1494 1625 1892 2006 2001 4023 43 Total 25552 27192 30638 36474 49866 71160

The total amount of deposits nearly trebled between 1938 and 1943, and more than trebled by the end of 1944. To-day, the total amount of bank deposits stand in the neighbourhood of Rs. 1000 crores. These figures, however, include inter-bank deposits and are not adjusted and, therefore, a note of caution is needed in drawing inferences from them. But the general trend of phenomenal growth which they represent is indisputable.

#### CAUSES

While on the one hand we have the optimistic vlew as given by some of our business magnates -for instance, the statement of Sir Padampat Singhania at the opening ceremony of the Hindustan Commercial Bank in 1943, "that there is scope in this country for ten times the number of existing banks"we have, on the other hand, warnings and misgivings expressed by other observers. For the optimistic side, it may be said that India is a vast country with tremendous potentialities of economic advancement and the consequent role which banks can play in bringing to fruition the vast reconstruction projects is large. On the other hand, there are a number of failacles prevalent on the notion of banking development. Thus, for example, it is pointed out that whereas in Britain and America there are upwards of 200 banking offices per million of population, in India there are even now less than a dozen. The conclusion drawn is that India is sadiv deficient in banking facilities. Such a facile conclusion overlooks two important facts. (1) The buik of short term needs of trade and industries in the country are satisfied by the indigenous bankers, i.e., shroffs, regarding whose extent of operations no exact figures are available. But it may not be seriously doubted that their share in business can stand comparison with that of joint stock banks. The problem of coordinating their activities and bringing them into line with modern methods is indeed great but is irrelevant from the point of view of the magnitude of their present busines. (2) Banking resources must ultimately come from the real incomes of the people and it is here that we at once notice the superficiality of comparisons with other countries It is estimated by Colin Clerk that the average real income per head in British India in terms of international units is about 200. The figures for U.S. A. and Great Britain are 1381 and 1069 respectively. To increase banking facilities in India, therefore, before increasing the national income is like putting the cart before the horse. Nor can the mere increase in

the number of banking offices succeed in popularising the banking service, i.e in inducing the people to entrust a greater part of their savings to banks. Only a sound and widespread education may change the habits of the people, and that too slowly. Finally, we mist understand that the present expansion in banking is organically related to the war-time monerary policy of the Government, and therefore, contains inherent weakness. We may now examine that policy in detail and measure its impact upon the Indian Banking System.

The supply of banking resources in the last resort must come from the real savings of the people, The annual increase in the total cash holdings of hanks is one measure of that part of the savings of the people which they are willing to entrust to banks. Taking the four pre-war years, 1935-36 to 1937-39, we find that the average yearly increase in the case of joint stock banks for India and Burma was less than 24 lakhs. The average for India alone, from 1939-40 to 1942-43, works out at 250 lakhs And this in times of war when desire for liquidity, i e demand for cash-holding by public had gone up Clearly, the latter increase has not come from the genuine savings of the people, but from what may be cailed artificial savings, viz, the inflationary increase In the supply of money That the total general savings of the people have gone down may be seen from the fact that over 50 crores worth of Postal Cash Certificates and Postal Savings Deposits were cashed by the people from 1939 to 1943. That the people have been frittering their savings under the stress of high cost of living can hardly be doubted. On the other hand, it may be argued that the subscription to the Government loans has, since the beginning of the War, gone up by nearly 500 crores But it is estimated that normally people in this country are willing to invest about 20 crores in the long-term Government borrowing, Judging from this, it is clear that during the five years from 1939 to 1944 over 400 crores of subscription to the Government loans have come from the inflationary expansion in currency. What these artificial savings have meant to the people in real suffering, this is hardly the place to go into The point I want to stress is that while genuine savings have gone down, artificial or monetary savings have moved up. This disequilibrium between the two is sure to lead to disaster when the pent-up demand of the people will in due time find vent in an orgy of purchases of consumer and durable consumer goods, making a heavy demand on the cash resources of our banks and involving them in difficulties Secondly, with the slowing down of the inflationary increase in the supply of money, the "cash and cash at bank" position of our banks will be impaired, while the demand for assistance from trade and Government may not decline at all, but rather show an increase, leading to the working of banks on a lower cash ratio which may prove to be inadequate.

Ultimately, the real savings of the people come from their incomes. It is agreed on all hands that owing to the war and the inflationary method of finance the real income of the people in terms of consumption goods and services has actually gone down. The terrific rise in the cost of living is an indication of the same. The official figures show that the rise is as much as 135% over the level obtainlng on the eve of the war. But these figures take no account of the black market prices which have been universal, until lately, since when the Government control has screwed up. The widespread famine in Bengal and the acute suffering all round are a commonsense test of the loss in the real income of the people. Statistically, it can be proved that war demand has left the country with hardly haif its peacetime production and imports for civilian consumption. (See Dr. V. K R V. Rao's 'War and the Indian Economy'),

With lower real incomes real savings would hardly show a rise, specially in a country where the national income is too low even for bare subsistence. Increase in money income, on the other hand, has gone up owing to the inflationary expansion of currency, 1 e. that expansion of money which leads to a rise in prices of goods in general demand. The yearly expansion in currency in circulation and demand deposits (taken together with their respective velocities) does in fact constitute the increase in money in use. Since the war began, roughly speaking, the respective expansions have been 800 crores and 600 crores. We can see the strength of the inflationary expansion from the fact that whereas the average yearly expansion in deposits for 1935-36 to 1938-39 was about four crores, for the period 1939-40 to 1942-43 it was eighty crores. The annual average net absorption of rupees, including one rupee notes, into circulation was-from 1935-36 to 1938-39-7 crores (i.e. during these years rupee notes actually returned from circulation to the extent of about 28 crores) whereas from 1939-40 to 1942-43 the annual average increase in circulation was over 28 crores, le. a total of 112 crores during these years Far from this increase in circulation having gone into hoards, it has been actually in circulation, because (1) since 1940 the silver content of the rupee was reduced substantially, making it less profitable to hoard; (2) the figures include rupee notes which have been issued in substantial amounts and runee notes are hardly hoarded; (3) there has been a substantial rise in employment due to the war and workers receiving their incomes in rupees and notes must have spent them for obtaining wage-goods. It is clear then that there has been an inflationary expansion in the value of currency.

Once again this widening gap between real income and money income is fraight with danger. Apart from the danger of an actual loss of confidence in currency leading to a breakdown of the monetary system, there is the danger of the wiping out of the middle classes in this country. The redistribution, that has taken place during the last six years, of a diminishing volume of wealth available to consumers, though desirable in the interests of the working classes, has

In the beginning it is true that the demand for benk accommodation for war purposes will decline, but it will be substituted by that for catering to civilian needs, starved at present.

been at the expenses of the middle classes and even the workers themselves have been feeling the pinch of the searcity of goods their enhanced income-cannot buy. This meant an accumulation of bank balances by the businessmen who are practically buying the wealth of the middle classes. Theirs will be the dead hand which will grip the increasing wealth of the country now that beace has returned.

The following figures illustrate the expansion of currency notes in circulation:-

#### Table No. 9 (In lakhs of rances).

Figures for 30th Jane,

1399 1340 1341 1342 1344 31-42 1341 8-22-1344 225<sub>2</sub>20 245<sub>0</sub>01 26001 445<sub>2</sub>71 542<sub>3</sub>8 840<sub>8</sub>9 140<sub>8</sub>79.

The rate of currency expansion, however, reached Its maximum in 1943 when it recorded a total increase of 307.75 crores for that year; the same for 1944 was only 162 crores reflecting the success of the Government's anti-inflationary drive. There is another vital aspect of this expansion in currency as seen by its effect upon the rate of interest. Indeed, one of the reasons tempting the monetary authorities to expand eurrency is to depress the rate of interest and thus lower the cost of borrowing. The effect of increased eurrency is felt both on the short-term and long-term rate of interest. At the outbreak of the war in 1939 the average call rate was well over 1/2, but the same at the end of 1944 was 1/4 %. The average rate of interest yielded on Treasury bills of the Government of India was Rs. 1.63% per annum in 1938-1939. Rs. 1.86% in 1939-40, Rs. 0.89% in 1940-41, Rs. 0.82% in 1941-42, Rs 0.87% in 1942-43, Rs. 0.90% in 1943-44 and at the end of 1944 it recorded a low level of Rs. 0.50%. The long-term rate of interest has also shown a definite downward tendency. Whereas the normal basis of valuation of Life Insurance Companies in India before the War was easily over 41/2 %, the same for 1943 was under 31/2" and is likely to be 3% in the coming year. The movement in this rate of interest is an infallible index of the movement in the long-term rate of Interest. With the progressive decline in the rate of interest the earning power of banks correspondingly falls and with the growing competition amongst banks themselves the rate is likely to be depressed further. Till recently the banks were charging as high as 6% to 8% to contractors and 4%, to 6% on advance against equities, but, with the return of normal conditions the demand for accommodation from these quarters will cease and the banks will find it difficult to get on on present lines. We must also remember that the expenses of managemeot are abnormally high; secondly, when on account of competition, a number of banks, specially new ones, are paying as much as 1% on demand deposits, 3% on fixed deposits of one year and 4% to 5% on those of over one year, it is clear that the entire basis of working of such banks is precarious and they will soon find themselves caught by a change in financial conditions, with top heavy expenditure, reduction in deposits and reduced sources of earning. Partieularly, those banks which have not built up sufficient reserves out of war-time profits will face

a grave erisis. This leads us to the consideration of the capital structure of banks. We have already noticed the growth in capitalisation and we shall now examine the significance of this growth.

The ratio of capital and reserves to deposits shows the following movement for banks having pald-up capital and reserves of Rs. 5 lakhs and over.

Table No. 10 (In thousands of rupees).

(evoluting the Imperial Bank and the Exchange Banks).
(1) (2) (3) (4)

	No. of report- ing banks.	l'aul up capital	Total deposits.	(4) as percentag of (9) (Approx
31-12-1919	51	13756.24	100,73,49	14%
31-12-1940	5R	14,65,62	113,98,45	13%
31-12-1941	4,3	16,19,00	137,64,09	11%
31-12-1912	4.0	10,01,00	202.74.95	9%
31-12 1913	19-7	26,47,70	119,00 01	Roy

Thus, it will be observed that the proportion of capital and reserves to deposits of banks has sunk disastrously constituting a grave weakness in the capacity of banks to stand a crisis. We must remember that although the increase in per unit capitalization is a source of strength on the one hand, it also constitutes on the other hand an increased charge upon the profits of the banks which will have to sacrifice reserves in order to provide for dividends.

The cash position of some of the big new banks also does not suggest that these banks have emerged stronger from the duresses of the war. The following table gives the figures for all the scheduled banks:—

Table No. 11 (In takins of rupers)
(1 (2) (3) (4)

Year codel No. of reports

Lotal Cash Kalaime (Jaspercentage of (9))

with Rooters of (9)

	a K totale	neposits	Bank of India	(2)	
1979	140	251, 14	اها وقال	10 19%	
1940	1)2	275,70	37,06	20 TO %	
1911	12	337,52	41,70	12 17'r	
1912	(+3	446,10	1161	14 12%	
1913	71	658 10	116,21	17 10%	
21-12-1911	141)	619,01	10(4(1)	12 94 r	

It will be observed that barring the years 1940 and 1943 (both years marked by a plethora of innds), the eash ratio has not changed to any large extent, considering the expansion in deposits. At any rate it seems to be reverting to its original position in 1939. Assuming that the war demand for banking accommodation continues as in 1944, and also the rate of currency expansion continues during the current year, the ratio shall have moved back to the figure of 1939. A 10% to 15% ratio of eash to deposits is not very comforting for our banks the trial of whose strength lies ahead.

The proportion of cash to total liabilities for Non-scheduled Banks is as follows

Year ended	Percentage of cash to under ties.
1939	e *I
1910	7 H
1911	н.4
1943	10 7
1943	11 14
31-5-1544	10 4

It will be seen that the cash position of these banks is far from reassuring, particularly in view of

the comparatively larger increase in their demand deposits, as will become evident later.

Comparative figures for time and demand liabilities also show that the banks should keep a larger percentage of their liabilities in cash in view of the striking increase in demand deposits.

The figures for time demand deposits are as follows:--

Table No. 12.

Scheduled Banks Deposits (In crotes of rupces).

				-		-
No. submitting returns. Demand deposit Percentage to	55 134 36	62 174 94	62 234.73	61 335 <b>6</b> 6	70 457.87	587.60
total limbilities. Time deposits.	57% 102,21	63/3 100 76	67% 112.79	75% 111 04	77% 133.26	75% 190+89
Total Deposits,	236 60	275.70	837.52	446.10	591.13	778 49
				# excl	ndea Buzz	na Ranka

It will be noticed that the percentage of demand deposits to total Habilities has increased from 57% in 1934, a fact, which clearly indicates that the demand of the public for liquidity has steadily risen. The same tale is told by the following figures for the Non-scheduled Banks.

Table No 13 (In lakhs of rupees)
No. of Demend Time Totel Fercentage of demand to total banks.

deposits. deposits. deposits. deposits. liabilities (Approximately)

31,12,1940	604	526	1148	1674	31 %
31,12,1941	601	708	1217	1953	36 %
31,12,1942	584	1106	1359	2465	45 %
31,12,1943	580	1952	1727	9479	58 %
81, 3,1944	508	1888	2049	8997	48 %

The figures for the Non-scheduled Banks show a general trend of increase in the desire of inguidity by their depositors and this is an important fact in view of the normal position of most small banks which have a preponderance of time deposits over demand deposits. The desire for legidity of the depositors of these banks was particularly pronounced in the year 1943, since when there was a movement towards the normal, reflecting a return of confidence. But it is too early to say that the old proportion would be resumed, for it is highly likely that with the spread of the banking habit the proportion of deposits held on demand to time deposits will show a definite increase,

An analysis of figures relating to advances and bills and their ratio to total liabilities discloses a fundamental change in the employment of funds during the last five years for all reporting Scheduled Banks,

Table No 14 (In laklis of rupees)

Year ended. Advances Bills discounted (1) & (2) as percentage of total habitries.

1939	143.16	4.69	59 %
1910	101.45	2 40	38 %
1911	122 57	6.35	38 %
1912	95, 97	2 97	22 %
1913	160.86	6.74	25 %
29 12.1941	235,79	13,41	30 %

Loans of banks to trade and industry by way of advances and discount of bills accounted for more

than 50% of total liabilities of banks normally before the war. This proportion touched its bottom at 19% in September 1943, after which there was a gradual recovery until by the end of 1944 it rose to 30%. Not only the proportion of advances and bills to total liabilities declined but also the absolute amount between 1939 and 1942. The main reasons for this decline are that, in war time, industry is pledged to war production and the Government comes directly to the assistance of producers whose demand for banking accommodation therefore declines. Secondly, the banks have been investing heavily in Government securities as a patriotic duty and also in Treasury bills. Consolidated figures for their investment in the gilt-edged are shown below.

Table No 15 (In lakhs of rupees)

Banks having paid-up capital and reserves of 5 lakhs and over (excluding the Exchange Banks and the Imperial Bank).

Investment in Government and other securities.

Percentage of total decopits,

1939	38,95	38
1940	45,20	39
1941	61,57	45
1942	106,51	52
1943	169,53	50

#### Imperial Bank.

fear ended.	Investment in gilt edged	Percentage of deposits
1938	43.72	58.6
1939	127,13	
1941	64,89	59.1
1942	116.41	71.2
1943	130,20	60 7

The extent of increase in the holding of Treasury bills by the banks may be gauged from the fact that the average amount of Treasury bills outstanding with the public increased from 27 crores in 1938-39 to over 100 crores in 1942-43.

To sum up the effect of the war on the demand for banking accommodation, it must be said that there has been a tendency for that from trade and industry to decline seriously and that from Government to go up greatly.

### POSITION OF BANKS TODAY COMPARED WITH THAT AFTER THE LAST WAR

Having examined the impact of the war on Indian banking we may now compare the rough position of our banks at the end of the present war with that which obtained at the end of the last war. There are certain vital differences between the situation obtaining on the morrow of the last war and that which is arising today. The end of the last war found this country, as indeed all others, as unprepared for peace as they were for war. Now, talks of reconstruction are quite common in all flelds. The Government is busy with plans of demobilization, hig business with plans of industrial reconstruction, provincial Governments with development programmes and so on With regard to banking, the Government has on the anvil a comprehensive banking bill intended to safeguard the future of Indian banking. Unfortunately, the banks themselves do not seem to be quite aware of their responsibilities and one does not know how they intend to meet the future; yet, that they do not seem quite untroubled by thoughts of the future may be assumed. Again, the central authority has come more prominently into the picture than was the case in the iast war. The monetary policy of the Government can be taken to be more sympathetic and active than previously, as the monetary technique is far more advanced now and our knowledge greater. The establishment of the Reserve Bank in 1934 is another important respect in which the situation is different from that in the last war. As a central bank, one of its functions is that of the lender of the last resort and the Reserve Bank may be counted upon to come to the succour of banks which find themselves in difficulties not of their own making. Again, the capitalization of the new banks is definitely higher, as we have seen. The banks are also maintaining a higher percentage of liquid assets, i.e. cash and Government securities, than they did before. Then again the banking habit has developed a great deal during the intervening years and it is not likely that it will suffer a permanent setback even if there are some minor joits and panics. The progress of the various plans, both of Central and Provincial Governments, will also pump a good deal of money into circulation, a considerable part of which will find its way into the vaults of the banks. The demand for banking accommodation for reconstruction purposes will take the place of the recent war demand though after a time lag. All these are factors of strength which were not present at the end of the last war. On the other hand, the very size of growth of banking has made it unwieldy and the control rendered more difficult. The present bili before the Assembly does not contemplate a comprehensive control. The damage due to the failure of banks is for the very reason of enormous growth likely to be more severe. An important cause for alarm is the unpredictable factor, the measures the Government will adopt in controlling the forces of defiation. We have already seen the enormous growth in bank deposits and the volume of currency in circulation. The latter is directly linked with the acquisition of sterling by the Reserve Bank in return for goods supplied and services rendered to the Ailles in the War. The following table shows the rate at which our steriing holding has accumulated.

Table No. 16 (in lakhs of rupees).

Sterling securities held. Sterling belances held.

	In issue department of the Reserve Bank.	by the Reserve Bank l banking department.
31,12,1939	107.50	6,98
30. 6.1940	131,50	20,20
30. 6.1941	116,80	47,83
30, 6 1942	266,85	80,39
30, 6,1943	567.79	75,89
31.12.1943	734,84	120,60
00 12 1944	891.53	352.84

If we compare these figures with those for increase in currency in circulation given in table No. 9, we shall find the close correspondence between the latter and the sterling securities held in the issue department. This must obviously be 50, because the Reserve Bank is obliged to issue rupees in exchange for sterling at the fixed rate of Re. 1 = 1s. 6d. In a short time the sterling accumulation will come to a stop and with the progressive repayment of sterling debt by Britain a corresponding withdrawal from currency in circulation will have to take place. This contraction in the volume of currency will be reflected in the contraction in deposits of the banks and their difficulties will then start, assuming that counter-acting measures are not adopted — an assumption which is not altogether invalid and which may well constitute the most serious threat to the banks in times to come.

At this juncture it is also interesting to notice a few undesirable features of the present boom, Among these we may mention advertisement of inflated figures of deposits, attraction of depositors by offer of high rates of interest, opening accounts of persons without proper introduction, ioans to questionable parties at high rates (a very jucrative source of earning but one which in the long run proves disastrous), iending on mortgage of fixed property (such as factories), waste in expenditure on advertisement and office furnishing, maintenance of unprofitable branches, waste in the method of work (an unnecessary amount of time is wasted and stationery consumed because the management mcreiy follows the oid rut without realizing that what may have been good for old established banks would not do for new ones) and so on Of more importance are: (1) speculation in Government Securities ("Differences in the sale of securities" is an item in the published balance sheets of banks which should be carefully noted). It simply means profits from speculation in Government securities and, in the case of some new banks, this item will be found to be quite the major portion of their profits; (2) appropriating aimost entire profits to dividends, without providing adequately for reserves; (3) opening of branches in over-banked towns and cities; (4) tying up funds in some ventures of directors. The war in the military sense is over, but it is possible that the boom in banking may continue for some time more. If the war-time economy gets smoothly adjusted to peace-time economy in the post-war reconstruction, the present boom in banking may not only show no sign of nervousness but might even prove conducive to the general economic devciopment of the country. It is in the light of this fact that the impending Banking Bill, at present on the Legislative anvil, deserves to be studied, discussed and framed so as to turn the boom into lasting prosperity. However, as the Biii itself is under discussion, it is too early to pass a judgment regarding its effectiveness in controlling the banking structure of India, both of the present and of the future. It must not, however, be forgotten that no matter how strict the law, If the people responsible for the running of banks are not of the right sort, the banks will sooner or later come to grief. Banks in India in the past, as in many other countries, lacking in healthy tradition of banking practice, have come to grief mainly because of unsound or unscrupulous management. The general monetary situation naturally affects banks to a great extent but it is unlikely that banks in our time will suffer from lack of foresight or knowledge on the

#### 15 Years Ahead

part of monetary authorities, for, the knowledge of sound monetary practice is available to monetary authorities and I believe the will to put it into practice is also there. So the chief evils of Indian banks now, as before, still remain, viz inefficient and unscrupulous management Against the latter, there is really no effective remedy, except a general uplifting in the moral tone of public life. Unfortunately, in this respect there seems to be a definite deterioration, whether we consider the banks, businesses, education, politics or any other field. With regard to the other evil, viz., mefficiency, to a great extent the scarcity of trained personnel, particularly in responsible posts, is a contributory cause. This is but a natural outcome of a sudden growth in banks during the last four or five years and also of the shortsighted policy of old established banks in not having training schemes for officers, even in their own interests Buefforts should be made to increase the efficiency of the officers and staff by the management taking active interest in removing waste and introducing economies by rationalization whenever necessary.

A heavy moral responsibility lies on the authorities of the banks They can, on the one hand, by pursuing a sound banking policy bring strength to the Indian economy, and on the other, by indulging in unsound practices or by merely drifting into old ruts and taking the line of least resistance plunge the country into financial chaos. The future alone will show what course they intend to pursue

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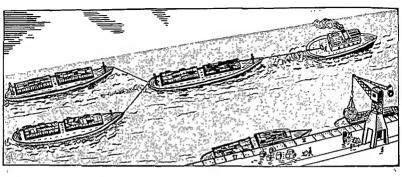
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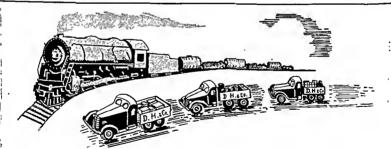
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## PLANNING OF RAILWAYS IN INDIA

J. E. CASTELLINO

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Mr. Castellino has elaborately and lucidly explained the role of railways in the Indian Transpert system and also their relative superiority over those of some of the advance countries of the world. Mr. Castellino maintains that if 'comfort and travel for all', as an essential social freedom, is to be won in the era of reconstruction, the present system of Indian Raulways will have to undergo a complete recrangement by considerably increasing the present mulcage, by exacting an economically more reasonable and co-ordinated network, by improving both the mechanical and management and control aspects and, is short, by modernising them to severe the national aspirations in all different advances and an analysis of the property of the control appects when the property of the control appects are supported in general to throw away their traditional lastifieds and develop a wore progressive out-look so as to make valuagis foster not only nascent industries but also promote schemes of social teclifare and justice

Executive Editor

HE trumpet call sounded by railways rings loud over the country. From Landi Khana, the gateway from Afghanistan, to Dhanushkodi, the fringe of Ceylon, from Zahldan on the Perslan frontier to Ledo on the Burmese border, there is a fairly vast and varied rallway service on the wheels of which are annually carried over 500 million passengers and 100 million tons of goods. In an official estimate made sometime ago, it was reckoned that the bus, the bullock-cart and the river craft did not carry more than 10 per cent of the inland traffic of India. The Indian Railways, therefore, play an important role in the economy of the country, quite apart from their normal function of oiling the wheels of trade and industry. The country, as a whole, has expended Rs. 858 crores on the railway system, of which the State's share is Rs. 781 crores. It is one of the biggest State enterprises in

the world, overshadowed only by the Russian and German State Rallway systems, but overshadowing completely all capital investment in all the basic industries, in the country. The phrase "productive expenditure" finds a new meaning in the context of rallways, dams and bunds; more than two-thirds of the public debt of India has been expended on the building of rallways.

On their domestic side, the railways fuiffi an Invaluable function in the economy of the country. If each employee is regarded as the head of a family of five, then one per cent of India's "400 millions" is directly dependent on railways for its sustenance. In pre-war years, an annual gross income of Rs. 100 crores was obtained on an average, of which 60 per cent came from goods traffic. In the financial year 1943-44, 783,303,800 passengers were carried at an average

Hundred and fifteen

rate of 3.97 pies per mile. The greatest contribution, both to numbers as well as to earnings, came from the third class passengers; 750,037,200 persons travelled in the third class and contributed Rs. 53,94,98,000 out of the total passenger income of Rs. 67,10,58,000. The biblical phrase "the first shall be last and the last shall be first" obtains further confirmation in the statistics of goods traffic, for coal, which pays the least freight charge per ton per mile, is, like the third class passenger, responsible for the largest single contribution to goods earnings, namely, 16 per cent, the next in importance being the group comprising of "Grains and Oilseeds" which accounts for about 15°, of the total goods revenue of Rs. 102.318,2000

Fundamentally, therefore, the problem which faces the railway management is that which faces the Government as a whole. The people are poor, though the country is rich. Material wealth abounds, but development is meagre. The need for transport is great, but the effective demand is small. In a world, where all success is judged by the yard-stick of rupees, annas and pies, the problem of satisfying the most elementary needs is almost baffling, 750 million passenger fourneys by rali compares very unfavourably with the figure of 1750 million which obtains in England, where motor transport accounts for quite a substantial portion of inland traffic and where the population is much smaller. Similarly, the tonnage of goods moved by rail, viz. 98 millions. looks insignificant in front of the 300 million figure for the United Kingdom. True it is that the average fare charged on Indian railways is about the lowest in the world. In pre-war days, a passenger paid about 3 pies per mile for his journey, whereas in Great Britain, it was a little more than double that amount. Equally consoling is the figure for goods traffic while in the British Isles, a ton of goods was carried for one mile at a charge of over 14 pies, the corresponding figure in India was less than 7 pies. But is the level of income anywhere near a comparable mark? Has an anna the same significance elsewhere as it has ln India?

"Travel for ali" is thus one of the freedoms we want to win It is freedom of association: it is freedom from restraint; it is freedom of trade; it is freedom from the shackles of time and of space. One of the most memorable of legends is that borne by various schools and colleges, "Provocans ad volandum". Teaching the young to fly in mind, in spirit, and why not in body? It is not for nothing that man's unconquerable spirit has at last brought to reality the dream of Jules Verne; the water is being swum, the air flown. It is not for nothing that travel has always been regarded as an education: from the contact of peoples, from the clash of cultures, civilisation has progressed. It is not for nothing that transport is ranked highest on the priority list of H.E. the Viceroy, who said in December 1943: "The other great aim of post-war development is the improvement of the social services. The main social services must be developed in the following order, communications, health, education. I put communications first, since I do not see how it is possible to effect any great improvement in health and education in the villages of India until they can be reached surely and quickly at all times."

There is peace in the picture of a farmer ploughing homeward his weary way. There is poetry in the tinkle of the bells round the bullock's neck and the creak of the cart, winding monotonously along the dusty road. There is romance in the flowing salls of a craft, lazily drifting down the river. There is splendour in the elephant, colour in the palanquin, zest in the horse. That was yesterday, the day of unending leisure, when the tempo of life was slow, sedate and stately. The needs of today can only be met by fast and cheap transport Every minute Indian railways carry 64,000 passengers and 52,000 tons of goods. But in a vast sub-continent of the size of India, where prevail floods and famines, plagues and pestilences, usury and unemployment, nenury and poverty, transport connotes much more than a mere circulation of men and materials. The success of any plan - for economic development, for social security, for cultural regeneration-must rest on an adequate disposition of transport facilities

What is the position that railways will occupy in the econtribution to national safety, economic development, social prosperity and cultural progress which railways are destined to make? There is not the slightest doubt that for some time to come, railways will provide the cheapest and most effective medium of transportation. The mesh in which there are large gaps must, therefore, be more closely knit, and in spite of the phenomenal developments in the internal combustion engine and technical progress in the formation of road surfaces, a large increase in railway mileage is desirable. Is it too much to postulate that no village of vor 5000 souls should be more than 50 miles away from a railway station?

Extensions of railway lines is, therefore, our immediate alm, but mere addition may tend to subtract something from the usefulness of railways. Can India afford 4 classes and 4 gauges? In the battle of the classes-as in all wars-the middle ciasses will probably disappear and "refinements" will be introduced at the upper end-air-conditioned stock, observation cars, radio services, music salons, libraries on de-luxe trains. There will also be foud insistence on greater amenities for the third class passengers who will not be content to travel in conditions which are said to be sultable only for cattle and criminals! The installation of electric fans, the cushioning of seats, and improvement In latrines are demands which will have to be met. sooner or later. The battle of the gauges must be imminent: standardization of rolling stock can only be perfected with the abolition of numerous gauges. Apart from this consideration, there is the economic wastage involved in transference of passengers, luggage and parceis and transhipment of goods at break of gauge junctions; both time and money are

unnecessarily lost. Government credit is high, money will be cheap, men and materials will be galbandant, in fact an expansionist programme will be welcomed as it may stave off unemployment of labour and depression of trade. Why not a change from the metre gauge to the broad gauge, or, if the latter is too expensive, a conversion to the standard gauge of 48%" as a good compromise?

Whatever the cynic may say of the effects of slow horses and fast women, there is an appeal in speed which is irresistible. India's record in this direction is very poor. The fastest long distance train in India, the Frontier Mail, has a start-to-stop speed of 36 miles an hour. Even the Decean Queen, electrically operated, does the short run of 119 miles at an all-in speed of 44 miles an hour, Future running speeds will have to be in the region of 75 miles an hour, if all high class traffic is not to be lost to air-services. And the acceleration of a few selected trains will, in future, not be considered as an achievement worthy of praise: the whole of the rallway services will have to be geared up to the speed of modern commercial conditions.

Aithough the pride of place among transport agencies is held by railways, their position is apt to recall Oscar Wilde's libe at Bernard Shaw: "He has not an enemy in the world and none of his friends ilkes hlm". This is most unfortunate, particularly in India, where railways are publicly owned. They are a national asset of the highest magnitude, but they seem to be regarded as a "hereditas damnosa". a legacy of British imperialism, a cess-pool of bribery and corruption, an arsenal of nepotism, an asylum for wooden-headed unimaginative officers. Is it enough that the raliways are soivent and that they contribute, rather handsomely, to the general exchequer? Is it enough that the passenger fares and the freight rates are about the lowest in the world? Is it enough that they give direct employment to about a million persons? Is it enough that they meet the minimum needs of the people?

If progress has any meaning, such considerations are of little value. Nearly a hundred years ago, Lord Dalhousle in the famous Minute of 1853 justified the provision of the new form of locomotion in the following memorable phrases:—

"It cannot be necessary for me to insist upon the importance of a speedy and wide introduction of railway communications throughout the iength and breadth of India. A single glance east upon the map recalling to mind the vast extent of the Empire we hold; the various classes and interests it includes; the wide distances which separate the several points at which hostile attacks may at any time be expeeted: the perpetual risk of such hostility appeariog in quarters where it is least expected; the expenditure of time, of money and of ilfe that are invoived in even the ordinary routine of military movements, would convince of the urgency of speedy communication, and if the political interests of the State would be promoted by the power which enlarged means of conveyance would confer upon it of Increasing its military strength, even while it diminished the numbers and the cost of the army, the commercial and soeial advantages which India would derive from their establishment are, I truly believe, beyond all present calculations. Great tracts are teeming with produce they cannot dispose of. Others are scantily bearing what they would carry in abundance If only it could be conveyed whither it is needed......"

One may legitimately wonder whether these high hopes have been realised. One may even venture to enquire whether the aspirations of the peoples of India can be fulfilled so long as the political barometer continues to show "no change". There are immense possibilities of using the rallway system for the good of the country, but as Sir M. Visyesyaraya has recently pointed out, the situation seems pretty hopeless. "Having for many generations been under dependency rule", says he, "apathy, indifference, fatalism, have had prolonged sway over effizens' minds, their working calibre, both individually and in a collective capacity, has grievously suffered and their living conditions brought almost to the verge of disaster". Absolute faith in the inevitability of graduainess seems to flourish in the anonymity of officialdom.

It is generally held that the rallways in India are not as progressive as those in other countries. Whatever the defects of private enterprise, there is one factor which acts as a spur to progress. Profit is that ignoble motivating force which, in the hurlyburly of modern life, takes the piace of "The Highest Good" In India of the morrow, what is the highest good which railways should seek? How can modern transport aid in the realisation of the Four Freedoms? In the chain of production, distribution and exchange, transport provides an essential link. Raw materials to factories, finished products to shops, workers to their employment, executives to their meetings, children to their schools, all the world to their homes, their playing-fields and recreational parks, their places of worship and pilgrimage, their centres of study and culture. In Utopia, transport would be as free as speech, as voluntary as association. Transport would be as present as fear is absent, as plentiful as want is scarce. In India, free transport may not be available for many years to come, but may not the nationalised ratiway system be used as a fulcrum for progress?

Freedom from want implies, in India more than anywhere else in the world, China even not excluded, a complete rearrangement not only of the material resources of the country but also of its mental, social and cultural values. In a country where traditional begging is wont to cloak itself in the garb of religious poverty; where a goodly fifth of the population is supposed to be treated as beings different from man; where emphasis on caste and creed could rend society into opposing divisions; where indifference

and filteracy are apt to foul the springs of progress—in such a country, planning is as necessary as it is difficult. At every turn, immense obstacles are met; at every stage, opposition is encountered. But if the Four Freedoms are not to be mere slogans to full the war-weary into complacent acceptance of modern slavery, if the forces of evil are not to sway the destines of mankind in this enlightened century, if the Lord of Creation who all along in history has been a weak helpless creature of those in power, is to inherit the world, then knowledge, rather wisdom, must hold full sway. Knowledge has been used to destroy; wisdom can only be used to create.

There is a theory that, where all industry is organised on a basis of prafit and not of service, State-owned enterprise should also be run on strictly commercial principles. There is a theory that users of any service must neither be mulcted nor be subsidized. There is a theory that when the State has in the past borne losses, it must enjoy profits in the future. There is a theory that every form of Stateenterprise may legitimately be used to foster the greatest good of the greatest number, even if that number includes not the persons from whom a monopoly price is demanded or a heavy yield from progressive taxation is derived. All these theories find acceptance mostly in different countries but not infrequently in the same country at different periods. Germany, for instance, has always used its nationalowned railway system as a potent economie instrument for furthering its fiscal policy, its rapid industrialisation, its social and political regeneration. At the other end of this world, there is Australia which has "regarded its railway network as largely developmental in character and has never fixed its rates and fares with a view to profit-earning .... .", according to a report in the Rallway Research Service Bulletin for May 1942,

Australia affords a good parallel. It is a young country, dependent in a great measure on its rural economy, it is a country entering rather late into the stream of industrialisation, it is a country where rail-ways suffer from gauge difficulties, for, out of a total mileage of 28,000, 50 per cent is built to a gauge of 36°, and 285°, each ta that of 5'3° and 4'8½°. There is even a small mileage of railways built to a gauge of 2' and 2' 6°. It is a country whose economy is somewhat akin to that of India. If there the railways are run for service and not for profit, is it too much to hope that railways in India will not be regarded as a milch-cow to feed the general exchequer?

In February 1944, when H. E. the Viceroy addressed the Legislature, he said, "Our great aim must be to plan for economic and social development so as to raise our standards of living and general welfarc. We must lift the poor man of India from poverty to security, from lil-health to vigour, from ignorance to understanding, and our rate of progress must no longer be at bullock-cart standard but at least at the pace of the handy and serviceable jeen."

All Departments of the Government of India are

naw actively engaged on post-war planning. In the second Report an Reconstruction Pianning Issued by the Reconstruction Committee of Council, it has been stated that the ultimate object of all planning must be to raise the standard of fiving of the people as a whole and to ensure employment for all. The fallawing twenty-six main subjects are being dealt with:-(1) Finance. (2) Re-settlement and Re-emplayment of ex-servicemen, (3) Post-war employment. (4) Disposals, Contracts and Utilisation of Ordnance Factories. (5) Trade and Commerce. (6) Industrial Development. (7) Roads and Road Transport. (8) Railways. (9) Post-war Shipping Palley. (10) Inland Water Transport. (11) Civil Aviation. (12) Postal and Telegraph Service. (13) Electricity Development, (14) Mining Development. (15) Irrigation, Waterways and Drainage, (16) Food. (17) Agriculture (including kindred subjects such as animal husbandry and anti-erosion measures), (18) Forests, (19) Fisheries, (20) Cooperative Societies. (21) Instructional Propaganda and Rural Uplift. (22) Education. (23) Public Health and Medical Services. (24) Housing, Town Planning and Urban Administration, (25) Labour Conditions. (26) Scientific Research.

It will be observed that every aspect of national ecanomy has been considered and in the Summary of Development Policy In respect of Rallways, it has been stated that until the maturity of the post-war plans of the Government in regard to Trade, Commerce, Industrial Development, Agriculture, Education, Roads and Road Transport, etc., "It is not possible to estimate even approximately the full extent of the improvements and general development which would be needed an railways to keep pace with other post-war development. All that can be and is being done is to prepare a plan for reconstruction on a basis which is practical enough to be put into execution without an excessive strain on the finances af the Government, and which would place Rallways in a position from which the basic plan could be enlarged or adjusted to keep pace with the past-war schemes being planned by the Government."

The basic plan of the Railway Board provides for the following objectives:-

- (a) Rehabilitation, repair and replacement of locomotives, wagons, coaches, track and other equipment which have been subjected to abnormal wear and tear, or whose renewal has fallen into arrears as a result of the War.
- (b) Establishment of workshops for the manufacture of locomotives, bollers and other railway equipment in India, Plans are in hand far commencing the manufacture of locomotive bollers as soon as possible during the war and of complete locomotives as soon as practicable after the War.
- (c) Absorption of demobilised army personnel in railway services.

- (d) A programme of annual replacements of engines, wagons, coaches, workshop machinery and other equipment spread uniformly over a number of years, so as to assist materially the industries established or to be established in the country.
- (e) Improvement in the services for goods, parcels and passenger traffic.
- ifi Financing the construction of new lines in undeveloped areas, replacements of lines dismantled during the War, and Improvement of through communications by gauge conversions of selected portions of existing lines. This would be done in consultation with provincial and State Governments according to a suitable order of priority fitting in with the road development in their respective areas. railway plan provides for the present for a yearly construction of 500 miles of new railways for a period of 10 years. This programme will be capable of expansion according to requirements as they develop. Proposals will shortly be made to secure special consideration for lines required for the development of the country, even if they are likely to be run at a loss for some time to come.
- (g) An examination into the existing grouping so as to make such adjustments in territorial boundaries as would appear to be desirable and to provide for joint running powers where required.
- (h) Extension of activities of railways to other transport services — road, air, etc., either through actual operation or by securing an interest in existing services. Co-ordination between railways and other forms of transport will be attempted with the co-operation of provinces and states. The question of the use of railway bridges by motor transport or the eonstruction of new combined bridges for road and rail will also be considered on the merits of each case.
- (1) Development of staff welfare organisations to improve the conditions of railway employees, particularly in receipt of welfare and efficiency. This would include supply of drinking water, extensions to railway hospitais, additional dispensaries, training schools for staff, railway institutes, improvements to staff quarters and additional quarters, disposal of sewage, etc. etc. and also the elimination of corruption and pillering.
- (j) Provision of special amenities for third class passengers, both in trains and at stations. This would include improvements to platforms, provision of overbridges, latrines, additional waiting sheds, improved water supply, improved booking arrangements, provision of

- improved seating for the third class passenger, improvement in coaches and provision of additional coaches.
- (k) Evolution of a new rates structure in keeping with the post-war requirements of the countryas a whole.
- (i) Reduction in the number of classes on rallway trains.

Under the basic plan now being worked out, rallways will require, as shown in the statement below, an expenditure of Rs. 319 crores in the first. seven years of the post-war period, out of which approximately Rs. 125 crores will have to be met out of the depreclation fund, leaving about Rs. 194 crores to be financed out of the additional capital to be ralked:—

Post-war years.	İst	2nd	3rd	4th	Sth	6th	7th	Total in crores.
A-Rehabilitation	10	25	20	20	20	20	20	125
B-Improvements (I) Operative Improvements.	1	4	8	8	8	8	4	41
(2) Staff Welfare	3	5	8	8	8	8	5	48
C-3rd ciass amenities	1	4	4	8	5	8	8	45
I-Construction of new lines.	1	5	10	10	10	10	10	56
Total in croses	16	33	54	54	54	54	54	319

Planning is now a fashion and perhaps too much emphasis is being laid on economic planning in India. The success of any plan must rest on the disposition of transport facilities. Despatch of raw materials, mobility of labour, ease in trading and freedom of commercial activity, disposal of orders, meeting of demands, supply of goods - all these arepainfully limited by transport. If the function of any plan is to make the average citizen a happier person, success or failure is dependent upon the measure in which transport facilities are available to the nation. It will be acknowledged that India is a poor country. It will also be acknowledged that passenger fares and freight rates on Indian Rallways are about the lowest in the world. What is not generally acknowledged is that economic development and social prosperity are linked up with transport costs, which in a poor country must be kept down to the minimum. If in the interests of the country it is decided by the competent authority that a certain industry should be fostered, the necessary corollary is that the railway rates must be adjusted not on a priori principles, but on the needs of each case. If workers are required to live in gardentowns situated far away from their mills or factories, then passenger fares must be regulated, not on commercial principles but according to social needs. In a community, where the aim of the transport undertaking is deflected from the ideal of service into a

channel for profit-making, its purpose is frustrated.
On the contrary, it is proper to suggest that a nation
may utilise such a vast State enterprise as an instrument for shaping its economic and social policy.
The issue which must be decided by the country is
whether the railway system should be run as a purely
commercial enterprise or whether it should be subordinated to the higher needs of the country. The
answer would appear to be very clear.

Railway rating, therefore, is a function of the highest order and transport charges must be correlated with decisions of policy taken in other spheres, such as the policy of the Tariff Board, the strategic requirements of the country, the needs of basic industries and of the socially desirable developments and so forth. The twin sister of economic development is social prosperity and the modern mechanised world, organised solely for profit and not for service, shows very convincingly how economic development can be achieved at the sacrifice of social prosperity. Here again, the function of railways is of the highest order. Generally, location of industry is governed by the need for securing maximum efficiency of production and distribution. But social prosperity demands the distribution of industrial activity in such a way as to eliminate the evils arising from excessive congestion in particular localities, concentration in vulnerable areas, wide disparities in living standards, appearance of sium areas, overcrowding and ill-health. The railway, as the most powerful agency of transport, must be made to play its part in the dissipation of the industrial evils.

The lesson which history never fails to teach is that no war can be fought to prevent war. Although India's record in modern times can truly be regarded as pacifist, the need for strong defence can never be overlooked, "The brightest jewei in the British Crown" must aiways continue to invite unpleasant attention from hostile people, and railways which have demonstrated during the Second World War their capacity to meet the heaviest of the most unexpected demands made upon them, must be rehabilitated and developed to a pitch of efficiency such as will contribute effectively to national safety. It might be a voice in the wilderness; it might be considered even war-mongering; but experience, which is the best guide, demands that all lines leading to the frontlers must be duplicated, primarily as a strategic measure, secondarily as a means of providing purposive employment during periods of cyclical depression and tertially as an instrument for the development of the country.

Not the least among the objectives is the cultural progress of the country. In the spacious days of long ago, travel was regarded as an education and in a country like India, where so many castes, creeds and colours exist, cultural progress must depend upon the elimination of all barriers to social Intercourse. One can never fall to wonder how in a country so tainted by communal differences, har-

mony exists in a railway carriage which provides a temporary harbour to men and women of various shades of political and religious opinion. The future of India rests not so much on the development of its agriculture, the prosperity of its industries, or the safety of its people, as upon the mental health of its citizens. Education is the prime need and to the extent to which railways help in eradicating narrow social prejudices, to that extent can the railways be treated as instruments of welfare.

There are for railways many symbols of progress. There is Speed—for faster tempo of life. There is Availability—for prompter response to varying needs. There is Power—for greater capacity. There is Economy — for cheaper satisfaction of demand There is Safety—for freedom from fear. There is Profit—for social gain — And there is Service—for better living.

It is usual to iook upon the American as a pioneer in rogress. What is his idea of the railway? This is what he says in his own inimitable and picturesque phraseology:—

"Always searching for new things and finding them-That's railroading.

Is it rails and rolling stock, freight cars and coaches, iocomotives and signalling devices? Is it steam struggling to be free or electronic things that see in the dark?

Railroading is the flow of grain from farm to distant city. It is a mountain of ore moved from mine to mili. It is raw materials speeding to factories—troops and guns and gear going to war.

It is the mother's welcoming cry as her soldier steps off the train. It is heat in the home—and a ticket seiler serving you at his window.

These and a thousand things — that's rail-roading!

And it sprang from the forge of the mind of man inspired by dreams. Minds that are at once creative and practical.

You see the inspiration in the ribbons of steel rall that puncture the horizon. You sense it in the swift, convenient schedules, feel it in the sure way the despatcher clears the track.

And you know that railroading is not just an invention. It is a continuing thought—a growing tree with roots deep in the soil of necessity and branches reaching into the light.

It can never stand still any more than the human mind can stand still. It will always be searching for new things and better ways—and finding them."

That is grand, but true. Can India aspire to such progress? "Kismet" is the traditional philosophy of the East, but fatalism is now strangely out of place. The railways of India belong to the Indian people. The personnel is largely Indian. The policy can almost wholly be shaped by the representatives of the country. Our needs and our aspirations—these are the only factors. Who knows what the genius of the Indian peoples can achieve? Who knows that "the Glory that was Ind" will not once again emblazon the world? The Orient has been a spiritual home-in the past. 15 years ahead—in a changing world, it is a long period. 15 years ahead—is it too much to believe that India may, in the future, as in the distant past, always be 15 years ahead?

All Indian Railways (Classes I, II and III.)

Items.	1938-39 (Pre-war)	1939-40	1940-41	1941-42	1942-43	1943-44
Gross earnings (crores) Rs.	207.15	111.50	126.36			
Total Working expenses (crores) Rs.	71.18	72.20	73.19	80.33	86.52	113.86
Net earnings (crores) Rs.	35.97	39.30	53.17	64.36	81.37	84.94
Operating Ratio per cent	66.44	64.75	57.92	55.51	\$1.53	57.28
Number of passengers originating (crores).	53,06	52.97	57.57	62.32	62.23	78.93
Passenger miles (crores)	1874.28	1852.20	38.5001	2202,01	2435.28	3248.34
Carnings from carriage of passengers						
(crores) Rs.	30.73	30.47	34.14	39.69	48.80	67.11
Average earnings per passenger mile Pies	3.15	3.16	3,29	3.46	3.85	3.97
Freight ton originating (crores)	8.84	9.22	9,28	9.70	9.53	9,59
Freight ton miles (crores)	2215.88	2349.25	2528.85	2804.31	2810.65	2836 06
Farnings from earriage of goods (crores)	68.57	72,56	81.45	89.63	97.21	102.82
Average earnings per freight ton mile (Pies)	5.98	5.93	619	6.14	6.64	6.96
Total train miles (crores)	19.70	19.88	20.09	20.54	17.68	17.26
Gross earnings per train mile Rs.	5.40	5.64	6.33	7.10	9.49	11.52
Working expenses per train mile Rs.	3.58	3.65	3.66	3.93	4.89	6.60
Net earnings per train mile Rs.	1.82	1.99	2.67	3.17	4.60	4,92
Net earnings per mean mile worked Rs.	8,619	9,427	12,746	15,578	19,811	20,741

## ROAD DEVELOPMENT IN POST-WAR ERA

#### T. R. S. KYNNERSLEY

2 R S Kynnersley OBL MC ACGI, M. Inst. C.P., MI Mencl E. M.I.I. (Ind.), (Int.), Enqueer, Concerts vesociation of Indian Issainal Enqueer, Tanjong Pagar Dash, Works, Singapar, Int. 1911, Executive Laguery, Bombey Improvement First, 1927 Clarf Langueer, 1927 R. E. Field Co., A.P. Major Commonding this unit, is at prevent the President Imahay Branch of the Indian of Lagueres India and Vice-President of the Louist of the Indian Roads and Transport Descriptions.

With a historial ictrospect, Mr. T. II. N. Kyanistey has pointed and in a very interesting to disciplinating mainter the importance and negacing of road decleopment in baths in the immediate paties. The graining tenffic of inflowables both for vivil and military prepare, has gluringly brought and to be made in a programme of road declopment. Supported by large and produced expression, the law kymicalcy's against a cognitive declopment. Supported by large and produced expression, the name date start in that therefore is particularly where only illuminating and his emphasized on summon and and similar designating the grain of the particular declaration of virial elements.

T has been rightly said that the man who instory and thereby laid the foundations of wheeled traffic in any form, did more for the material progress of humantly than perhaps any other individual. The road makers were the torch-bearers of progress; soon civilising influences followed in their wake. At all periods of the world's history, the available means of communication and transport have proved a vital factor in harmonising the social and political complexion of the people.

Indian civilisation goes back to not less than five thousand years and from those early times can be traced the record of roads and wheeled vehicles. At Harappa in the Punjab, which dates back to 3000 B.C., there was found a ministure two-wheeled cart with gabled roof and driver seated in front, fashioned in copper, which is one of the oldest representations of a wheeled vehicle in the world. Since those days there have been ample records of transport conducted by pack animals and by the use of charlots, elephants, camels, bullocks and bullock carts, many of which, because India is poorly provided with good roads, are still in use.

Satisfactory as India's position was in the golden ages in relation to the stages of development other countries of the world had reached at that time, one of the biggest defects in India's economy today is the fact that her roads have not, either in mantity

or quality, kept pace with developments in other spheres, such as the increase in population, agriculture, industries or commerce. India, today, has not the roads that she should have in order to confer the barest amenities of civilization on her inhabitants, whether in the cultural, hygienic, social or economic sphere.

A comparison of India's road mileages with those of other countries of the world reveals the magnitude of the leeway that this country has to make up in road development. The following figures are self-exulanatory:

Country	Road Mileage to the sq mile	Road Mileage per 100,000 of population.	
England	2,02	393	
France	1.38	980	*including cart
US.A	1.00	2,500	tracks and
Germany	095	260	bridle paths
Italy	0.75	217	
_	0 22	89*	†Metalled roads
India	0.15	61†	and fair weather earth roads.

From the standpoint of resources, India is one of the richest countries in the world, but her agricultural and commercial progress has been retarded by lack of roads and the consequent cost of bringing those resources to marketable centres. There are many areas in the country where the agriculturist

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does not concern himself with producing an exportable surplus because he has no means of bringing such a surplus economically to the market. Trunk and district roads, though unfit for modern conditions, do exist to a certain extent. But of what benefit are these to the cuitivator if he has no proper access to them and has to pay the high cost of the primitive form of transport which he has to use? The waste of time, money and energy suffered by the primary producer even in bringing his cart a few miles out of his village through fields or uneven tracks is simply enormous. The spectacle of a cart having to be escorted by three or four attendants, in addition to the cart driver, to prevent the vehicle tumbling down over narrow tracks, one side of which is at a level of 2 or 3 feet above the other, is not at ali an unusual one in some of the rural areas. Even so, thousands of viliages are cut off from the outside world during the four or five months of the monsoon.

In a country like India, 87%, of whose population are spread over 650,000 villages, any effort to improve the transportation and distribution services must start at the cultivator's front gate. If the cost of transportation from the front gate to the next step in the transportation system is exorbitant, it serves to nullify the effect of reasonably low freight rates over railways, fair hauling charges at terminal markets and economical distribution in consuming centres.

The adverse effects of poor communications on the Indian cultivator were strongly stressed by the Royal Commission on Agriculture under the Chairmanship of Lord Linlithgow in 1927. The Commission emphasised how efficient communications exercise an immediate effect on the factor of time which is an essential element in the price factor. Good communications in any area will often bring new crops within the range of profitable cultivation. In fact, it has been the improvement in communications since the middle of the nineteenth century that. more than any other factor, has brought about the change from subsistence farming to the growing of money crops, such as cotton, jute, groundnut and tobacco. The Commission further emphasised the point that bad communications, by imposing a constant strain on the health and stamina of draught animals, seriously reduce their efficiency for the aliimportant work of cultivation. Finally, bad communications not only hamper the agriculturist in the marketing of his produce, but also raise the price of his own purchases from elsewhere. The Commission concluded, in short, that the true income of the cultivator is largely dependent on the efficiency of communications.

It was the realisation of India's backwardness in roads and the desire that some effort should be made to remedy it that led to the appointment of the Road Development Committee in 1927 under the Chairmanship of Mr. M. R. Jayakar, charged with the work of examining the desirability of developing the road system in India and in particular the means by which such development could most suitably be tinanced. In their Report published in 1928, the

Committee emphasised the need for road development in India for the better marketing of agricultural produce, for the social and political progress of the population and as a complement to railway development. They found that road development was passing beyond the financial capacity of Provincial Governments and Local Bodies and was becoming a national interest which, to that extent, might be a proper charge on central revenues. Their main recommendation was that the duty on motor spirit which then amounted to 4 annas per gallon be raised to 6 annas and the proceeds of the additional levy should be distributed to Provinces and Indian States through the creation of a Road Development Fund.

When this fund was created, hopes were justiflably entertained that it would mark the beginning of a real effort to provide India with an adequate and efficient net-work of roads. Actual experience on the contrary has been the reverse, for, many Provincial Governments, instead of utilising this new fund-small as it was in relation to the needs of the country-for supplementing their previous expenditure on road development, merely used it to replace a part of the expenditure formerly borne by provincial revenues. Admittedly, the two or three years lmmediately following the introduction of the Road Fund, were years of acute financial stringency, but the Provinces failed to put things right when the financial position returned to normal. To add to the troubles, the ordinary maintenance and repairs of roads-which is a charge on provincial revenueswas also systematically starved despite increased traffic on roads and the accompanying increase in provincial revenues from taxation of motor vehicles. This resulted in the rapid deterioration of roads in most of the Provinces.

Figures of road expenditure show that the total amount spent in the Governors' Provinces in the year preceeding the Introduction of the Central Road Fund was Rs. 6½ crores and 10 years later 1.e. in 1933/39 this amount, Instead of Increasing at least to the extent of the new source of revenue, had actually dropped by half a crore, and in three of the Intervening years, there were drops amounting to more than 1½crores a year.

This reduction in road expenditure which defeated the purpose of the Central Road Fund. occurred despite the fact that during these ten years the revenue from motor transport had doubled itself. In 1938/39 motor transport contributed Rs. 9½ crores to the public exchequer which exceeded by more than 50%, the road expenditure of Rs 6 crores. In 1940/41, it may be mentioned this revenue increased further to Rs. 11½ crores, of which more than two-birds went to the Central Government who have, as yet, no direct responsibility for road construction or maintenance.

The recognition of the failure of the scheme of the Central Road Fund brought with it suggestions for further schion and in 1933 the Road/Rail Conference, finding that the lack of balance in the real system might not be susceptible of correction, either at all or at a rate consistent with the economic needs of the country if the means of development were restricted to revenue resources, recommended that a comprehensive plan should be drawn up with a view of examining the possibility of development of both main and subsidiary roads from loan funds within the limit of the resources available for maintenance. It was again hoped that this recommendation would mark an epoch in the history of the country's development, but unfortunately enough, nothing materialised beyond a very small special road programme in the United Provinces.

#### POST-WAR PROGRAMME

It is, however, an encouraging sign of the times that greater recognition is given, both by the public and by the Government at present, to the fact that a programme of road development must form an integral part of the post-war reconstruction proposals.

The non-official plan for economic development of India, published by Sir Purshotamdas and others, recommends the construction or improvement of over 500,000 miles of roads. The People's Plan, which is still more ambitious in point of road development, recommends that 450,000 miles of new roads should be constructed and 220,000 miles should be improved at a total cost of Rs. 550 crores.

Nor have the Government of India or the Provincial Governments, now that they have made up their mind to inaugurate a big scheme of post-war reconstruction, been slow in stressing the important place that road development must fill in such a scheme.

The Government proposals, as formulated by a conference of Chief Engineers in December 1943, involve the raising of India's road mileage (in the whole of India including the Indian States) to 400,000 miles, representing an increase of 65% over the existing mileage. The cost of this programme, computed at 50% above pre-war price levels, is estimated at Rs. 450 crores. This is somewhat less ambitious than the two non-official plans, which one can well understand, because where expenditure is involved, however productive it may be held to be by the com. munity, it is obvious that Government's target is aiways for the irreducible minimum. Such a minimum proposal is the Chief Engineers' Road Plan for India, as was explained recently by Mr. Vesugar, the President of the Indian Road Congress, Mr. Vesugar, who had a prominent hand in the formulation of the programme, says: "The recommendations were based on minimum widths, minimum lengths and numbers, the minimum amount of bridging and the minimum construction specifications".

#### FINANCIAL RETURNS FROM ROADS

It is true that many of the benefits from road development, such as the contribution made to educational progress, heaith, personal enjoyment and the provision of the many other amenities of civilization, are intangible and are not capable of measurement in terms of rupees, annas and pies. Some of the other advantages, however, are less intangible, as

for example, the economic gain to the community and the rise in revenue to the Government. To attempt an evaluation of the economic gain conferred by an adequate road system on the community and its relation to the cost of constructing and maintaining the roads, the Indian Roads & Transport Development Association carried out a Pilot Survey of certain small areas of Bombay Presidency in 1943 which vielded most satisfactory results. We found that financial benefits to the community would occur under three main heads-saving in transport costs, Increase in land under tiliage and change-over of cultivation to money-crops including fruits and vegetables. In the selected areas, the financial benefits to the community under these three heads were estimated at Rs. 12 lakhs per year, whereas the necessary roads including satisfactory maintenance for 20 years would cost less than Rs. 41/4 lakhs annually, including 31/2% interest on a road loan redeemed in these 20 years. Thus, for every i00 rupees spent on roads, the return through increased earnings to the community would amount to Rs. 277. This is independent of the inevitable rise in the revenues to Government and the additional traffic that would be received by the railways - both of which are substantial items.

The waste of money in transportation, caused by a bad and inadequate road system, is seldom presented to the public in its full magnitude, although it is vaguely realised that a vehicle, whether it be a bullock cart or a motor vehicle, can operate more cheaply and efficiently on a good road than on a bad one. Assuming that haulage costs by bullock carts are about 2 annas per cart mile heavier on kutcha tracks than on good road surfaces, it can be shown that a good road system would each year save cartage costs by as much as Rs. 55 crores. Similarly, Mr Vesugar in his recent address to the Roads Congress estimated that If 35 motor trucks or buses traversed every day a mile of good-instead of kutcha-road, the saving in petrol, oll, tyres and repairs which would accrue would provide sufficient funds to amortise a loan for building a mile of concrete road. When three hundred thousand motor vehicles are using the roads, the saving would equal the amortisation charges of the entire road plan of Rs. 450 crores.

Lower operating economies than these would be sufficient to enable, say, railways, to pay interest and redemption on any loan necessary for effecting such economies. In the case of road vehicles, however, India, unlike other countries, has too long been content with a position which does more than anything else to retard the country's prosperity.

But, apart from the potential financial galn to the community, that to the Government also is equally high. In recent years, revenue from motor transport has been increasing roughly at the rate of 10% annually with the result that whereas prior to 19% no more than 2% of the road expenditure of Rs. 4½ crores could be recovered through motor taxation, it was possible for Government in 1939 to get from motor taxation the whole of the road expenditure plus a sum of 358 lakhs of rupees or 159% of the road bill in all. When the road programmow envisaged is completed, the Increase in motor transport through such development would probably amount to as much as Rs. 40 crores per year as against Rs. 9½ crores at the beginning of the war. Further, Increased income to the community Increases the taxable capacity of the nation besides automatically swelling the receipts from "Income Tax".

It is clear from the foregoing discussion that expenditure on roads is an investment no less remunerative than in the case of railways. Would the railways of this country, or for that matter anywhere in the world, have come into being if they had had to rely on general revenues? Certainly not. America, which between 1894 and 1930 constructed thousands of miles of roads through the issue of Road Bonds, amounting sometimes to as much as 220,000,000 dollars per year, has demonstrated to the world how such a policy can help a country like India.

We are all hearing of the contemplated road programme and of the two-fold purpose it is intended to serve, firstly, the requirements of the period of transition from war to peace, and secondly, the contribution to the country's development and improvement so as to bring a more prosperous India into being. But how seldom is it realised that much preparation has to be done now, so that a programme may soon be ready for execution?

The kind of road planning must include three basic activities:

- Preparation of working plans, specifications, contract documents, estimates of costs etc.,
- Selection of rights-of-way and other necessary rights and actual acquisition where possible, in advance,

 Completion of legal and financial arrangements for immediate construction whenever the 'go' signal Is given.

If these matters are not completed now, the task of assisting the transition becomes extremely difficult—the task of affording employment for demobilised manpower and that of enabling the vast organisation built up by the war, including road machinery, road vehicles, drivers and allied mechanical personnel, to take its place in developing the India of the future. Delays in land acquisition have been known to hold up many urgent road works in the past and the same fate might overtake the future programme If the machinery for acquiring the right of way is not set in motion without delay.

I would end this article by emphasising the American saying that "you pay for good roads whether you have them or not; you pay more If you don't have them". This is more applicable to India than to any other country because of the colossal waste of money and loss of efficiency that occurs in moving vehicles along undeveloped roads and tracks. Moreover, the whole plan for general future development of the country revolves round the road plan because whatever may be the Intrinsic value of the schemes for rural development or education or health improvement, or the like, they cannot benefit the heart of the country unless there are roads. As the Bombay Government say in their booklet entitled "The Future of Bombay's countryside", "no kind of improvement can be fully or successfully introduced until there is proper access to all parts of the Province, particularly the outlying villages". It should, therefore, be the duty of every one of India's citizens, whatever his religion, whatever his occupation and wherever he may live, to take such steps as may be possible to see that the old excuse of lack of finance is once for all weeded out from our vocabulary where the immediate road programme is concerned.

## THE FUTURE OF INDIAN SHIPPING

#### H. M. TRIVEDI

II. M. TRIVEDI B.St. (London), Bar at Low, sometime Assistant Manager, Bombay Steam Nangation Co., Ltd. also conclume Secretary, Bombay Ship Repairs and Shipbuilding Panet, is at pieson in the services of the Government of India for shipping work. He is the author of Labour and Feeting Lendston in India.

No country in the world has achieved greatness unless it has had a strong weighant fleet. That is the key note of Mr. Trined's article and the justification for building up a mercantite manner in India is based not mercly on the innelmable right of Indians to achieve that reasons of greatness in the future as was then in the past but on India's favourable group photoal position in the occaunacy of the notal. Emphasis is placed on the cospon-dulity of covernment to nade assisting in the development of a thin building analysis.

T is now recognised that a very well developed and fully co-ordinated transport system is vital to the prosperity and planned development of any country Strictly speaking, this is not a newly discovered truth Until lately, that is before the development of air-transport, raliways and shipping constituted the twin forms of a transport system and it is well known that during the last century the most advanced nations have had either one or both of these modes highly developed.

Shipping or water transport Includes transport on navigable rivers and inland waterways; and such transport plays an Important part in a nation's economy. This has been particularly true in the past. Before the advent of road-ways and railways, transport by river was of paramount importance. The ancient cities of the world are to be found on river banks. Inland water transport has some advantages over road and rail transport. Sir Arthur Salter once said that water transport had the great advantage that God had provided "the permanent way". The costs of operation, even in the case of artificially navigable canals, are comparatively small, The capital charges on barges are smaller than on engines and rolling stock, and on jetties considerably less than on stations. The pay load is also better. While the tare of a wagon generally accounts for one-third of the total load, a barge only weighs about one-fifth of the total carrying capacity. With these advantages, it is not surprising that river transport is considerably developed in many countries. Great Britain has about 2500 miles of navigable waterways fairly developed, and the U.S.A. has a highly developed river and canal system. In France, the State has spent large sums to develop internal water

transport India has approximately 26,000 miles of inland waterways but, generally speaking, is not endowed by nature with very good navigable waterways Mainly on that account river transport in India has not developed to any great extent. Although one can proceed 800 miles up the Indus to Dehra Ismali Khan and the Ganges provides easy transport up to Cawnpore, India has only two important navigable canals: the Ganges canal from Hardwar to Cawnpore and the Buckingham Canal at Madras. There are very few shipping companies operating on rivers, the most important being those running in conjunction with the railways in Bengai and Assam. In view of the vast area of the country, however, a considerable further development of this cheap mode of transport is of primary Importance to the internal economy of the country. Sir Arthur Cotton vividly emphasised this when he dreamt of lines of navigation from Calcutta up the Ganges to Karachi down the Indus, from Coconada up the Godayari, to Surat down the Tapti, from Masulipatam up the Krishna to Honawar down the Tungabhadra

Both the scope and importance of inland water transport are, however, limited to, and conditioned by, the internal economy of a country. Under modern conditions, in the inevitable exchange of goods between nations, the key to commercial prosperity lies in the conquest of the "blue water" trade Back in history, the most powerful civilisations were built round the sea. It is not a mere accident that two of the commercially most prosperous and politically powerful nations both in the East and in the West are the sea-faring island kingdoms of Japan and Britain. Not a little of the "Splendour that was Ind" probably came from the early develop-

ment of shipping in India. For over a century now, Britain's powerful navy has made her safe from foreign invasion. Her navy largely contributed to the victory of the Ailles in the last war, and her mercantile marine has rendered invaluable service in maintaining supplies in this war. Before this war, Britain paid for over 20% of her imports by her shipping services. She monopolised a significant portion of the world's insurance trade and for a long time was one of the most important commodity markets of the world and the most important centre of trade. Both her commercial prosperity and political power largely rests on the navy and the mercantile marine. Of the smaller nations in Europe. a considerable portion of the national incomes of Norway, Sweden and Holland Is derived from shipplng services. While one of the major causes of politically independent China's economic dependence has been the absence of a strong navy and of a mercantlle marine, a span of 50 years was enough for Japan with an efficient mercantile marine to obtain for herself a good share in the world trade,

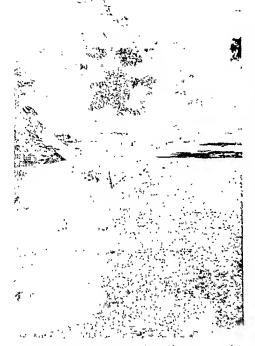
Vlewed against this background, it would almost seem like restating a truism to say that India with her vast coastline must possess a strong navy and an adequate mcrcantile marine. But unfortunately both are absent. Before this war, India practically had no navy. A nucleus has been raised during this war, but for purposes of India's defence it is admittedly insignificant. The vessels of the Royal Indian Navy are mainly engaged on coastal patrol and it is doubtful If this Navy has either the necessary number or type of equipped vessels or the necessary personnel for a naval action of any magnitude, even for defence. The position with regard to a national mercantile marine is almost equally tragic. India has a coastline of over 4500 miles. The coastline is indented and while most of the harbours are not good nor natural, all are susceptible of development into safe and large ports. There has been an increase in the capacity of some ports under exigencies of this war for handling larger tonnage and a greater variety of cargoes. These wartime developments can be capitalised to the future benefit of India's maritime trade. About 7 million tons of coal, oils, rice, salt, timber and other goods are carried every year in the coastal trade of India. Over 2 million passengers are carried annually along India's coasts. India has an overseas trade of over 25 million tons valued at Rs. 3150 millions a year. Over a 100,000 passengers travel every year between India and other countries. These figures are only indicative of the value of India's maritime trade. The benefit which accrues to a nation by adequate participation in this trade is not confined only to income from shipping. Such participation enters into the country's international balance of payments, gives scope for the development of insurance and diverse other services in connection with maintenance, repairs, supply of stores etc., and lends such strength to a nation's economy as few other single factors can effectively do.

There is reason to believe that India has not been unaware of the benefits of participating fully

In the country's maritime trade and the necessity of building an adequate and efficient mercantile marine. Enterprising Indians have made repeated efforts in this direction. 102 Indian shipping companies with a total nominal capital of more than £ 15,00,00,000 came into existence during the last fifty years. Less than 10 of these survived. No other industry in this country or shipping in any other country has had to wage a more strenuous struggle for existence or face heavier odds than Indian shipping during its chequered history. Established foreign shipping interests on the coast of Indla have constantly thwarted the growth of national shipping. "Indian company after Indian company which endeavoured to develop a coastal service has been financially shattered by the heavy combination of British interests" said Sir Alfred Watson. No one will accuse Dr. Taylor of attempting a journalistic feat when he stated: "The arrival in the Port of London of Indian produce in Indian bullt ships created a sensation among the monopollsts which could not be exceeded if a hostile fleet had appeared in the Thames. Shipbuilders of the Port of London took the lead in raising the cry of alarm. They declared that their business was in danger and that the familles of all the shipwrights in England were certain to be reduced to starvation."

Scores of Indian shipping companies went into liquidation under these odds Up to 1923, the Government of the country took little interest in the question of building a mercantile marine for India It was in that year that the Indian Mercantile Marine Committee was appointed. The Committee recommended the building up of a mercantile marine, the maintenance by the Government of a training ship to trai npersonnel, and a far-reaching scheme of Indianisation of the coastal marine in a period of 25 years. It suggested also that simpbullding should be revived and encouraged by payment of a suitable bounty. Of these recommendations none has been implemented except the establishment of the training ship "Dufferin". Even here the problem of employment of cadets from the "Dufferin" has not yet been satisfactorily solved. Within a decade after this Committee, established Indian shipping just managed to survive a bitter freight war waged by other shipping Interests on the coast. The net result of this struggle extending over 50 years has been that Indian shipping today has practically no place worth the name in the overseas trade of India. Less than 25 per cent of the coastal trade is carried in Indian bottoms. Of the developed maritime countries of the world. India has the smallest navy and the smallest mercantile marine, the total Indian registered tonnage not exceeding 150,000 tons. While Britain's pre-war foreign trade was a little over five times that of India's, Britain's tonnage was 135 times larger.

Why is this so? The most important, if not the not preason, is the lack of State support. Almost without exception, shipping in other countries has flourished or has been enabled to survive with direct or indirect assistance from the State. At several stages in the history of British shipping, the industry



ntinental size of India domands a very vest planning programme of temport and roods. Owing to gottude of the test, it will be difficult to carry it and affectively. It is therefore probable that for a bulleck cert will be used patentially in the country. But at best it is on enachmounted in world the and mountain. Planners must get buy to introduce more rapid means of linsapport.

has received State support in the form of relief from taxation, allowance of higher depreciation rates, reservation of trade and direct or indirect subsidies. The shipbuilding yards in America were, until the beginning of this war, subsidized by the State. In Japan, the State has contributed handsomely to the building up of a mercantile marine. It is true that the State has, on some occasions promised support to the industry in India, but the action taken has been on the whole ineffective. In the 19th century, the decline in Indian shipping was probably due to the steel ship. Indian shipbuilding was confined to construction in timber. The loss of political power coincided, in time, with the industrial revolution in Europe and the construction of steel ships. The decline in shipbuilding, which is the sheet anchor of a mercantile marine, probably contributed to the general decline in economic importance.

There is now reason to believe that the State has recognised the logic of these facts as will be noticed from the following quotations from the Memorandum submitted by the Government of India to the Shipping Policy Committee in December 1944: 'For a country of its size, the length of its coastline and its strategic position in world's main sea routes, India possesses a distressingly small number of deep-sea ships. which, at the outbreak of the war, stood at no more than 300 with a total of less than 1,50,000 toas gross. India's weakness in this respect has long been recognised, and the Government of India are pledged to a policy of assisting in the development of the Indian mercantile marine " "The vulnerability of India's position has been revealed by the stress of wartime conditions but by no circumstances more glaringly than by her inability to find adequate shipping from her own resources to provide for the transport of the food supplies required by her, The rectification of this state of affairs should be one of the immediate post-war objectives, not only for commercial reasons, but also because the development of the Royal Indian Navy necessarily implies current development of the Merchant Navy" ... "The acguisition of an adequate share of world's carrying trade should be the aim of our post-war shipping policy,"

This deciaration brings into relief the central problem of shipping in the post-war period. It is twosided. Firstly, the need to reserve coastal trade for Indian shipping by statute must be recognised and it must be enabled by such assistance as is necessary to acquire a fair share of overseas trade. Secondly, an efficient shipbuilding industry must be established, if necessary with the aid of a State subsidy, as the foundation on which both a Navy for defence and a Mercantile Marine can be raised. To those wedded to orthodox economics, the demand for reservation may savour of old fashioned mercantilism. But in truth, this demand is no more than a demand for protection. The charge of mercantilism would be valid if both freedom of the seas and freedom of trade were made equally real. When it is not so, a

demand for reservation amounts to no more than a demand for a protective duty, and in fact is much less innocuous in that it is not contrary to another nation's interests.

The extent to which Indian shipping should be enabled to participate in her maritime trade has been lately indicated. It is suggested that cent per cent of the coastal trade, at least 66 per cent of the trade with adjacent countries, not less than 50 per cent of overseas trades, with the U.K., the Continent, America and other parts of the world, and not less than 33 per cent of the trades in the Orient should be secured for Indian shipping.

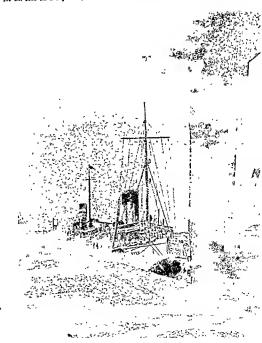
The significance of this demand will be seen from the table attached at the end, showing the values of

India's maritime trade with different countries. The values shown are wholesale prices not inclusive of duties. As we have seen, Indian shipping has practically no share in this trade. Even on a conservative estimate and assuming an overall 50 per cent participation in this trade, the annual loss probably amount to Rs. 150 million in freight alone.

The second important problem of the post-war period is the establishment of a shipbuilding industry. It is now recognised that the maintenance of at least an efficient nucleus of a shipbuilding industry is vital to a nation even in times of peace.

Perhaps a valuable opportunity to start and consolidate this industry was lost in India during this war - again owing to lack of State support. But this problem will have to be tackled now, if necessary, at some expense to the State. In the latest declaration of the Government of India's industrial policy, it has been suggested that the State may run a shipbuilding industry side by side with private enterprise. This suggestion has been reiterated by the Hon'ble Member for Planning and Government Development, India, in his speech before the Industrial Policy Committee in October, 1945, when he stated that, without interference with private enterprise, Government were considering the possibility of establishing a Governmentowned ship-building yard. In the absence of a declaration that Government intends to nationalise the shipbuilding industry, it is difficult to understand the need for a Government-owned shipbuilding yard, more so in view of the deciaration in the statement of Government of India's industrial policy that "basic industries of national importance may be nationalised provided adequate private capital is not forthcoming and it is regarded as essential, in the national interests, to promote such industries", It is well-known that private enterprise has been forthcoming in this industry. The need for a Government-owned yard beside private industry can only be judged in the light of our total needs for ships of various types. Our requirements in terms of total tonnage for the merchant navy can again only be judged in the context of the trades which are open to Indian shipping today and estimates of

In Indie with her long coestline, shipping is the very file-blood of her trede and consequently of the development of her wealth and strength. Occupying a central gangraphical position, India, with her own shipping, one command but the Eastern and Western trade routes. It will be a glarious day indeed when the will hold her own great this?



our needs for a navy of defence. Neither of these is yet clearly envisaged. The extent to which India will be able to obtain a share, on reasonable terms, of the surplus American and/or European tonnage which will be disposed of in the near future is also, so far, uncertain It is possible that if India has to carry even a substantial portion of her own coastal trade and a fair share of her overseas trade, she will have to augment the present volume of approximately 150,000 tons to a gross tonnage of over 4 million. But the extent to which both replacement and additions to the tonnage will be achieved solely by ships constructed in India to the exclusion of purchase from abroad will depend on statutory regulation or financial inducement directed to promote such a policy. On a fuller consideration of these aspects, the need for a Government-owned industry beside private enterprise in this sphere, if both are to run as efficient economic units, appears to be doubtful. It is possible, however, that this may have been suggested, so that in times of peace the yards owned by the State may provide a wholesome check on private industry which may conceivably he subsidized and in time of war the State will have the advantage of State-owned industry in a vital arm of defence. While it is true that there has been a general inclination in other countries to entrust construction of defence vessels to State-owned yards, this has by no means, been uniformly true. In any case the paramount needs of the State which must be served can always be safeguarded, as has been done in all countries, by emergency powers. In times of peace, with the existing foreign competition, a burden on State revenues through the establishment of State-owned industry in shipbuilding to provide for construction at economic costs by private industry does not seem justified. The declarations referred to are, however, encouraging in that they imply a recognition of the need for establishing a shipbuilding industry in this country.

Apart from these two subjects of primary importance to shipping in the present period there are other questions too, affecting its future. The terms of international shipping agreements, if India is a party to any, should be such as would not adversely affect the declared alms of our policy, namely the building up of a mercantile manne and the acquisition of a fair share in India's overseas trade

Very soon the obsolete tonnage and tonnage lost during the war will have to be replaced and fresh tonnage will be needed even for taking a greater share than before in the coastal trade. It does not seem possible that such tonnage can be obtained by construction in the country in the immediate future. In the circumstances it would appear necessary to take steps to facilitate such replacement by Governmental action. One such step would be to obtain, if possible, on reasonable terms, a share of the huge surplus American and/or European tonnage which will be disposed of now that the war is over and which may be suitable for the needs of our trades. It is obvious that this can be effectively done only by the Government participating fully to protect India's

interests in any international arrangements which may be considered for the disposal of this surplus tonnage. In the immediate aftermath of war the problem of providing financial resources to bridge the gap between recoveries under war risk insurance for ships lost during the war and the cost of replacing such ships by purchase or construction also has to be considered.

Allied with the post-war problem of shipping is country craft. During this war, a considerable amount of coastal carge has been carried by country crafts; an estimate places the figure at 1½ million tons per annum. In the Memorandum of the Government of India placed before the Shipping Folicy Committee, it is stated, and rightly, that India may have to look to all forms of transport to sustain her economy in the post-war period and that the continued development of country craft will therefore have to be considered, simultaneously with the coordination of steamer and country craft services as an essential part of this development.

A consideration of coastal trade by country craft immediately suggests that co-ordination of transport will be required not only as between country craft and transport by ship, but over a much wider field embracing railways and motor transport, especially in the determination of the relative freight structures. Such determination should presumably be guided by the necessities of planned industrial development in the country, and the prevention of national economic waste in transport. Practically all rallways are now State-owned in India. The State will therefore inevitably play a large part in such determination, and it seems reasonable to think that development of Indian shipping along fundamentally competitive lines would exercise a happy influence on the entire freight structure in the interests of national economy.

A corollary to co-ordination in transport is the extension of the system commonly known as "Through booking" i.e. booking of goods right up to the destination on a through Bill of Lading or a through Rallway Receipt covering carriage of goods to destination on the entire sea-cum-rail route. An extension of this system, as far as is possible, will greatly facilitate the country's internal trade and will probably be welcomed as a convenience by the trading community.

Ships have to be manned before they can sail, and the problem of trained personnel is as important in shipping as in any other branch or service requiring technical talent. Among the coastal peoples of India, there is no dearth of suitable human material to man our ships—seamen who are equal to the best to be found in any other sea-faring nation of the world. But the Officers and Engineers of a ship have to be trained men, and it seems necessary to take immediate steps now to train suitable men command and run the ships, if we are to have a

mercantile marine in the post-war period of any in the field of shipping, it may not be long before reasonable size. With trained men, and with such the dream of sailing the seven seas in an Indian ship courace and enterprise as has been displayed so far is realised.

TARLE .

Values of imports of merchandise (exclusive of Government stores) from principal countries into British India and exports. Irom British India to principal countries in the year 1938-39.

A 5	5 I A	AF	RICA	AME	RICA	EUR	DPE	Australia, New Zealand	
Parts of British Empire.	Other foreign countries,	Parts of British Empire	Other foreign countries,	Parts of British Empire.	Other foreign countries.	U.K., Hire and Channel Islands.	Other foreign countries	New Zealand and British Total, Pacific Islands.	Total,
Rs.	Rs.	R5.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs,	Rs.

IMPORTS.

EXPORTS. 19.76.71.076 24.30.62.156 3,79.83,918 2,26,66,971 2,44,07,117 10,83,05,664 55,87,02,632 31,90,64,695 3,49.63,040 1,62,79,16,269

Taken from "Annual Statement of the sea-borne trade of British India with the British Empire and Foreign Countries" published by the Department of Commercial Intelligence and Statistics, India.

## PLANNING OF AVIATION

#### M. R. DHEKNEY

M. B. Dlakney, M. A., M. Com., et a Professor at the B. M. Cottege of Commerce, Poona

In this article, Prof. M. R. Dukiney has traced the history of Art Transport in India in a detailed annue; and by comparison shown how great is the development necessary in this field if India is to take he right place among the indians of the world. His emphasis on the fact that India occapies a single and extremely advintageous geographical position in the Eastern Himselpher is prefectly him at a subsentiumful county fit wise that claid austions tould come to play is itsuly marked out against similar desired in advanced sixtoms take the U.S.A. the U.S.S.E and those of Weeter Dirache. He has also noted the relative position of Air Transport and has anywel like includes a perfectly co-ordinated policy for transport as a whole is kept in record twould not be possible to alternyl Air development whether to, multiary or viert purposes. His numbers on the development quantified undustry and newagent frameworks and and timely admitted in overafficial reservoirs in most of anyth and therefore on the development quantified undustry and newagent reservoirs is most off and timely

IR Transport owes its commercial success to the stimulus of the First World War. Since then its history has been one of phenomenal advance in equipment, range of activity and operating methods. In aviation, there has always been a restless quest for improvement, but it is the Second World War that has acted as a forcing house for technical developments. Much of the progress in aeronautics is still kept a secret, but when the time comes for its application to commercial air transport, far-reaching effects will follow. The greatest progress has been made in the manufacture of alreraft by the use of mass production methods Higher speed, increased size with additional capacity to carry cargo, greater range and improved radio aids to navigation have further produced far-reaching changes in operational technique. Thus, the world today is far more air-minded than it was ten years ago. The rate of advance has been so rapid that 'the moment an alrcraft is perfected, it becomes obsolete'. In these circumstances, it becomes very difficult to foresee the precise changes which will come in air transportation fifteen years ahead; and yet, it is not unreasonable to indicate both the direction and the distance that aviation may reasonably expect to advance during the next decade or two.

#### SOCIAL, POLITICAL AND ECONOMIC IMPLICA-TIONS

A mastery of the air is a step in progress quite without a parallel in human history and is bound to bring about profound changes in the social, political and economic activity of man. Improvements in all forms of transportation have always been followed by advances in the industrial structure and in the realms of national and social economy. Thus global aviation is certain to bring about the

shrinkage of the world, which in its turn is bound to break down the barriers of mind, stimulate tradeand industry and provide new and increased opportunities for greater social and economic intercourse. Politcal frontiers may, however, remain rigid and restrictive from the standpoint of economic activity and may occasionally produce strains which usually result from the conflict between politics and technology. Whether the mastery of air results in the advent of an era of orderly human progress or results in stagnation, air imperialism or war, depends much upon how far man resolves to treat this mastery exclusively for peace. Given goodwill and vision, the next fifteen years may witness the birth pangs of a new political and economic order which will lead the world to a more lasting peace. Every country in the world will thus have to prepare Itself for the air age In which the lives and thoughts, nay, the very concept of government and power, may undergo significant changes.

#### AIR TRANSPORT: Its Nature and Comparison with other forms of Transport

Air Transport is as yet too recent to have evolved a complete theory of economics. In fact, before 1920, it had not come within the sphere of practical politics to any large degree. It may be said to have attained an adult age only with the Armistice. Viewed from the standpoint of speed, transport by air stands out with marked superiority to the older methods either by land or sea. In a recent test flight, a Sunderland flying boat carrying seven passengers covered 5,039 miles from Poole to Dorset (England) in 33 hours and 52 minutes only. If we study the trend of over-water traffic between New York and London, in which, since the advent of war, statesmen and soldiers have run back and forth, it can be estimated that in the

immediate future this journey would be reduced to 14 hours. Thus a passenger departing from London at 6 p.m. will be able to arrive at New York at 8 a.m. the next day. In the next decade, far greater performances may be witnessed in the field of aviation speed, Speed, however, is most expensive for commercial aviation because of the disproportionate amount of power that is required to achieve it. High speed. unfortunately, is incompatible with low cost and there is a limit to the amount that an average passenger is willing to pay for o saving of time. It has been estimated by Dr. E. P. Worner of the Civil Aeronautics Board in U.S.A. that, in 1929, the economic cruising speed that could be ottained without running into costs was 130 m.p.h. for a 12 passenger plane. In 1940, the corresponding figure was a little over 190 m.p.h. for a machine of 20 passengers capacity, Making appropriate corrections to eliminate the direct effect of the size of the plane on speed, Dr. Warner estimates that the maximum economical speed at moderate altitude would be nearly 25 m.p.h. higher than it was in the stage of development some years ago.

The relative independence of surface conditions is another characteristic. Nevertheless, the primary factor essential for the successful operation of skyways lies not in the air but on the ground and on an elaborate ground organization with landing facilities, radio makers, beacons, and other navigation aids as a necessary part of air transport organization. Very limited initial investment is, however, required for ground organisation as compared with highways and raliroads. Fiexibility and frequency of service are other distinguishing characteristics. In fact, these advantages are inherent in the very nature of air transportation.

#### DISADVANTAGES OF TRANSPORT BY AIR

Owing to its dependence upon meteorological conditions regularity of scheduled air transport is not so great as that of surface transport. Scheduled flights have to be frequently cancelled, thus involving further indirect costs and loss of revenue as the passengers have to be either accommodated in a hotel overnight or directed to their destination by surface transport. Considerable advance has been made during the last few years in the meteorological organisation and the regularity-standard is bound to improve in the near future. Whether it will ever come to equal that of competitive surfoce carriers is a matter obout which little can be said in the present state of the science of weather-forecasting. Until air transport is made independent of meteorological conditions, it can never compete in points of efficiency and reliability either with railways or with steamships.

Another disadvantage from which air transport states is the element of risk. Railways and highways are not immune from risk but the element of danger has less chances to operate in their case. Even with the great advance in aircraft structure, in reliability of engines and in maintenance and inspection technique, an air carrier cannot as yet

equal the surface carrier in safety elements. Notable improvements have been made during the wor years in safety records and with better navigation years in safety records and with better navigation adds the accident rate is likely to be reduced to a degree comparable to that in highway transport. Both in the sphere of regularity and safety, there are the brightest prospects of improvement during the next fifteen years.

A low transport capacity and a high cost of services appear to be the most important disadvantages of air transport. As an infant industry, which is generally characterised by high development costs. state assistance has been given to civil aviation in all countries of the world. Airport and landing facilities, communcations (radio and otherwise) and control and maintenance organisation are the most costly items in the preparation and maintenance of air routes. The other factors which affect the economics of air line operation greatly depend upon routes, length of stages, cost and efficiency of equipment, frequency and regularity of services, relation of average payload to capacity, speed of operation in relation to economic speed and amortisation period of aircraft and other equipment.

The operating costs in air transport are made up of direct costs which depend upon the volume of flying, type of equipment used, intensity of operation, prices of fuel and oil, and pliots' and crews' salaries, and, secondly, of indirect costs which are relatively unaffected by changes in the volume of traffic and are made up of depreciation, insurance of the equipment and the flying personnel, rents. taxes, ground organisation and other administrative expenses. In the present day market for transportation, the air transport industry is characterised as one of oilgopoly, where air line operators act as oligopolists rather than as competitors Under oligopolical conditions, costs tend to be higher in absence of the pressure of competition Recent trends in operating costs indicate that considerable cost reductions are possible in the immediate future as a result of improved design and operating technique, increase in payload and reductions in depreciation charges. The falling costs may thus enable airline operators over land and water to compete successfully with the first class passenger traffic carried at present by railway and shipping companies. In the case of domestic airlines in U.S.A., operating costs per ton mile have fallen nearly 80 per cent between 1926 and 1941. A recent estimate by Dr. Edward Warner indicates that with 65 per cent passenger load, passenger rates would be nearly 8.3 cents (4.39 annas) per mile for a four-seat aircraft using 100 mile stop intervals. For a six-seater, a twelve seater and a sixteen seater aircraft, the corresponding passenger rate fares would be 6.9 cents (3.65 annas), 5.2 cents (2.75 annas) and 4.5 cents (2.38 annas) per mile. The first class fares on Indian rallways vary from 11/2 to 2 annas per mile and there are good prospects for airlines to compete successfully with first class railway traffic. Viewed in a large way over a term of fifteen years, when air transport may become

self-supporting, they may be in a position to compete with the second class railway and shipping traffic in India.

Will air transport compete with surface carriers in operating air cargo? Over-enthusiastic predictions are being made with regard to such possibilitles. The problem will have to be considered in the light of relative figures of the cost of shipping by air, rail and water. As a freight carrier, an aircraft is characterised by low capacity and high costs. Efforts are being made, particularly in U.S.A., to design a low cost all-cargo plane, offering competitive commodity rates, and a recent estimate expects a fall from the current 80 cents per ton mile to 25.4 cents in air cargo rate in the immediate post-war years. Even when the cheap operating costs per ton mile are obtained, the freight carrying functions of the airplane will remain usually of minor importance. Articles of small weight with high degree of emergency-value alone can bear such costs, even when these are reduced to as low a level as 25.4 cents per ton mile. Valuable bank papers, medical supplies, drugs, fresh fruit, vegetable, electrical goods, motion picture films, diamonds and gold are the type of goods usualiy carried as air cargo.

While intensely industrialised countries may find an all-cargo plane suitable for carrying precious commodities, in an agricultural country like India, a combination of passenger and cargo traftic may prove to be more economical for some years to come. Similarly, the long-haul portion of air cargo may receive better impetus in a country like India with great distances. It is hardly necessary to add that air transport cannot replace other forms of transport even if allowance be made for such rapid technological changes as one can expect with the greatest stretch of the imagination. It is ever bound to remain a most expensive form of transport supplementing transportation now carried on by raili, water, and road.

#### GEOGRAPHICAL POSITION OF INDIA

It is worth while to glance at India from the geographical point of view, as geography is the essence in the air transport layout. It is geography that decides the sort of routes along which the air traffic will flow. In any scheme of international air transport, India occupies a unique place. Centraliv situated in relation to high land masses on three sides, India may be considered to be the true Middle East. The great inter-continental trunk routes for air traffic between Europe and Africa on the one hand. and Asia and Australia on the other, will have to pass across India. India is thus an indispensable link In global aviation. Viewed from the standpoint of internai transport, India ranks with U.S. A. and U.S.S.R. as a country which can develop great Internal services and can reach out abroad when and where it suits her. Large commercial and industrial centres are situated at distances providing Ideal conditions for aviation. There are still areas where surface transport is undeveloped and can never be developed properly owing to peculiar topographic

conditions. Meteorological conditions are also excellent over a large part of the year in spite of the Monsoons.

#### ORIGIN AND GROWTH OF AIR TRANSPORT

#### . IN INDIA

The history of civil aviation in India dates back to the year 1911 when an 'Aeroplane Post' was arranged as a part of the famous Aliahabad Exhibition. On 18th February, 1911, a French aviator, M. Pequet. took off from the Exhibition grounds where a special post office was opened and carried the special mails to Nalni, some six miles away. The credit of experimenting with the first official air mail in the world thus goes to India. The first World War demonstrated for the first time India's importance as a vital link in the air routes from the West to the Far East. As a signatory to the International Air Convention of 1919, the Government of India accepted certain responsibilities in matters concerning ground organisation and meteorological facilities. In 1926, the Indian Air Board recommended to the Government of India that they should provide at their cost ali landing grounds and the necessary meteorological Information and that they should accept the principle of subsidising Internal air lines in earlier years. It is on the basis of these recommendations that subsequent aviation planning was executed. By March 1929. Karachi came to be linked regularly with London and by 1933 the London-Karachi route came to be extended to Calcutta, Rangoon, Singapore, thus providing a link with the route radiating to Australia. In the same year, Indian Trans-Continental Airways Ltd. was formed with a view to operating the transcontinental route from Karachi to Rangoon alternately with Imperlal Airways Ltd. When the Empire Alr Mail Scheme came to be extended to India in 1938, all first class mail to the Empire countries came to be transferred to the air, resulting in increased frequency of service from England to India and on to Australia, Besides the B.O.A.C., the trans-continental land route was also flown across by Dutch Alr Lines and 'Air France'. Subsequent to the declaration of war in September 1939, the principle of the 'all-up' air mail service was abandoned and heavy surcharges were levled on all air malis.

#### DOMESTIC AIR LINES

In the sphere of Internal services, Tata Sons Ltd., Indian National Airways Ltd. and Air Services of India Ltd. are the three principal operators. Tata Sons started their operations in 1932, and since then have extended their operations from Karachi to Colombo, from Bombay to Delhi and to Trivandrum. The Karachi-Colombo route (1880 miles) is covered In 11/2 days as against four days and fourteen hours by train. Over the Bombay-Trivandrum route (785 miles), the journey is accomplished only in 61/2 hours as against 48 hours by surface transport, while in the case of the Bombay-Delhi route (810 miles) a saving of two days and two nights is offered on the return trip when compared with a journey by train, Tata Airlines have flown approximately 8,950,000 miles with a total of 16,420,000 passenger miles since the commencement of the operations in 1932,

Indian National Airways was established in 1933 with an authorised capital of Rs. 30 lakhs and a subscribed capital of Rs. 11.6 lakhs. The company has operated between Lahore and Karachi across a route of 688 miles in about 8½ hours, thus establishing contact with the Empire Services at Karachi. Since then, an extension was made from Lahore to Delhi and then on to Calcutta. During the last four years, the company's services have been mainly directed to the needs of air traffic necessitated by emergency conditions.

Air Services of India Ltd., established in 1937. with an authorised capital of Rs. 10 lakhs and an issued capital of Rs. 5 lakhs, operated prior to the outbreak of the war on the Bombay-Porbunder route (416) miles) in about 4 hours as against 27 hours by train. The amount of time saved and the fares (approaching aimost second class railway fares) charged enabled the company to increase the frequency as sufficient traffic was patronising the Kathiawar route. Before the outbreak of the war, air services between Bombay and Kolhapur (216 miles) and one between Baroda and Amreli (140 miles via Bhavnagar) were also run with the active support of the Governments of Koihapur and Baroda States. Since 1942, the company has had to suspend the scheduled services because of conditions created by the war.

The progress made by the Internal services is lilustrated by the following table:—

Z'ear	Mileage of Regular air routes.	Miles flown.	Passengers carried.	Mails carried Tons.	
1933	5,180	133,680	155	10 5	
1934	5,830	343,771	757	21 3	
1935	6,393	553,753	353	43 4	
1936	6,483	496,539	349	49.4	
1937	7,500	622,193	178	61.2	
1938	6,700	1,412,334	1,178	244.6	

#### PRINCIPAL FEATURES OF THE DOMESTIC TRANSPORT IN INDIA

Though the domestic airlines have made considerable improvement in miles flown and passengers and mails carried, the progress achieved is hardly satisfactory for the size of a country like India. The pre-war routes and ground organisation were mainly planned with reference to the Empire Services rather than to the economic needs of the country. In the absence of mail contracts, none of the operators could be said to have attained self-sufficiency. During the seven pre-war years, they had grown steadily and had obtained valuable operational experience and public confidence. They have all played a high strategic war-role on the home front or in the transport of personnel, equipment and supplies to fighting zones. Their pioneer work in the development of the skyways of India will always command attention and appreciation. It is also a tribute to their progressive outlook that they have been the first to develop. practically unaided, a network of internal lines which challenge in efficiency the commercial aviation systems of Europe and America.

#### GOVERNMENT OF INDIA'S POST-WAR AVIATION PLANS

A five years' pian for post-war civil aviation in India has been prepared by the Post and Air Department for the consideration of the Reconstruction Policy Committee of the Government of India. It aims at increasing the annual flying mileage flve times and the ton mileage fifteen times as compared with the pre-war standard. The plan proposes three types of routes, viz. (1) international routes for Empire and foreign services, (2) trunk routes and (3) essential links between trunk services. A fleet of 35 aircraft involving a capital cost of Rs. 150 lakhs. and manned by 50 to 55 pilots and about the same number of second pliots has been envisaged. In the case of trunk routes and essential links, the Government of India are expected to take the initiative in pianning and organization. Under the pian, the cost in the first year will be Rs. 2.53.00.000 falling to Rs. 1,90,00,000 in the fifth year. The revenues in the first year are likely to be short of the cost of operation by Rs. 160 lakhs but will show a profit of Rs. 13 lakhs in the fifth year. It is recommended that it is undesirable to promote one monopolistic concern for the whole of India and that it would be more desirable tohave a small number of large and privately owned operating concerns functioning under conditions of control laid down by a Licensing Board, While recognising the need of subsidies, it is proposed that a subsidy be granted on the basis of a system by which assistance will be confined to bridging the temporary gap between gradually ascending revenues and steadily decreasing costs, both the targets of costs. and revenues being fixed in advance.

The post-war plan, thus envisaged, is not likely tomeet in full the future requirements and possibilities
of air transport in India. As a post-war plan prepared
with a pre-war mentality, the target figures for the
route mileage are not only inadequate but the plan
hardly anticipates the need for India to participate in
the external and international service in the immediate future. Its scope is thus limited to domestic
services and it does not propose to promote air-consciousness of the people by cheap travel. In the sphere
of domestic transport, it should be further possible to
enlarge the scope of subsidies so as to cover not only
the deficits incurred in pioneering and maintaining
socially desirable lines but also those which are economically marginal or sub-marginal.

#### NEEDS FIFTCEN YEARS AHEAD

In the post-war years an enormously expanded productive capacity of the aircraft industry is bound to seek its outlet both in commercial and private air transport. With every technical advance, the sphere of economic plane operation will grow. It is at this stage that the greatest possibilities are presented in the sphere of aviation-planning. If India is to compete on equal terms with powerful foreign interests, comprehensive plans must be prepared in advance. Any delay in planning will make it extremely difficult for India to catch up with the progress which is bound to be very rapid in the next decade. The objective

<sup>\*</sup> Reduction is caused by the separation of Borms

will be naturally to ensure an orderly provision of air transport services as directed by immediate and future needs and the establishment of the new mode of transport as an Integral part of our future transportation system. For that, the Indian Government will have to be big and bold, not only in thinking and planning, but in spending adequately over our future air routes, a chain of airports and seaports, the provision of navigation and other needs. India is still an undeveloped country with a total railway mileage of 41.052 and a total road mileage of only 285.313. Under conditions of poverty, travel by air does not offer any attraction over other methods. Neither is it likely to be an essential link in the way of routine life as is the motor bus, for example. Can India, therefore, be asked to foot a bill which aviation enthusiasts want her to meet? If a long range view is taken, and that is what counts, it is worth while spending liberally,

In planning for the next one and half decade, an attempt will have to be made to link up all industrial and commercial towns by air, These will have to form the background for trunk and feeder lines of the future. If the large towns are to be brought within the orbit of civil aviation, an elaborate ground organisation will have to be planned from now onwards with constant emphasis on future needs. Far-reaching changes in the operational technique have been effected during the last six years and many more important still will doubtiess follow. In embarking on the development of ground organisation, it is not difficult to foresee which airways are likely to become permanent features of the country's transport system. Plans formulated and steps taken during the earlier years will result in the provision of adequate facilities and control throughout the whole country in the not very distant future. Post-war ground organisation will require larger aerodromes and stronger runways. Over the international routes across India, super and key aerodromes will have to be constructed to the standards agreed upon internationally. At the same time. attention will have to be paid to the regional organisation of the domestic routes if commercial air transport is to develop internally. On the internal routes, the ground organisation will be necessarily modest in character, but under no circumstances should it suffer from over-riding considerations of international air routes. It need not be supposed that the large number of air-fields constructed during the war will all be suitable for post-war commercial aviation, Commercial airports have to be strictly controlled in position and size by factors which may be unimportaht in times of war and yet the civil airports and wartime airfields will have to be an integral part of future planning. It is not too much to expect that municipal bodies also will play their role in the future of aviation. In England and U.S.A., municipal enterprise in the construction of suitable landing grounds was a vital factor in the promotion of club and private flying. In this connection, something can be said in favour of the state subsidising airports and landing grounds constructed by municipal authorities. Pliots and crews trained during the war

period constitute a promising and dependable corps of personnel capable of handling the air traffic of the future years. In addition, hundreds of mechanics trained in repairs of aircraft and working of the ground organisation are available to form another formidable team to support post-war aviation plans.

#### SEA AND AIR TRANSPORT

Air routes across oceans will offer considerable scope for development of civil aviation; and it will be necessary for India to possess a commercial airfleet. India's overseas trade, if it is to expand, will in future require a balanced first of ships and fiving boats. The Indian shipping companies do not claim any specialised knowledge of aviation but what they possess, and can offer as a practicable contribution to this task, is the wealth of experience, an efficient organisation and a network of agencies in India and in those countries which have intimate trade relations with India, Political and geographical considerations suggest flying boat services from India to the Persian Gulf, Netherland East Indies, Burma, Iraq, Persia, and East and South Africa. It is quite possible that the transfer of passenger traffic from seaborne vehicles to airborne vehicles may also prove to be more abrupt. In a way, air lines and sea lines radiating to external lands will present the same problems, and in both cases, long term policles requiring an international outlook will be called for.

#### DEVELOPMENT OF AN AIRCRAFT INDUSTRY

The successful operation of services by landplanes and flying boats is dependent upon a vigorous aircraft industry. Canada and Australia both utilised the opportunities presented by the war to develop an aircraft industry and to train flying personnel. Had the Government of India realised the need for the industry. India would have been in a position to supply aircraft for operations in the Middle and the Far East. So many opportunities which the Second World War presented were lost. India must not suffer from that neglect again. It would be a wrong argument to suggest that India should confine herself only to repairs and maintenance of craft and the training of engineers and technicians. The aircraft industry possesses in India the necessary prerequisites viz., the raw material, cheap power and a large potential market. Even with the existing resources in aluminlum and plywood and wartrained technicians, India should be in a position to launch a bold manufacturing scheme; and there is no reason why an Indian aircraft industry should not be in a position in the next decade to manufacture planes that will sult Indian meteorological conditions and environment. State participation in the aircraft industry will have to be a permanent policy for defence needs. Progress in aviation largely depends on the finances supplied to research; and state aid will be indispensable to facilitate experiments in design and other navigation aids, not only for the near future, but for the distant future as well. Whatever

may be the future, an expanding air transport organisation with a baianced fleet of ships and flying boats, an air-minded people and above all a sound manufacturing industry will be an invaluable asset for the country in the future international situation.

#### · NEED OF A STATE POLICY

Important decisions have been taken in the Dominions regarding the future role of the state. Canada intends to adopt a policy of one chosen instrument' for air lines in the future. The South African Government are also inclined to the view that the Union should control all the routes. The Commonwealth Government of Australia have prepared a biue-print under which all small towns will be linked up by air. The Commonwealth Government also have decided to take over permanently all the inter-state airlines. Unfortunately in India, the claims of civil aviation have not yet been adequately voiced. The result has been that civil aviation has been paralysed between the two World Wars and there is reason to believe that the same fate will overtake the country again unless there is a drastic change in aviation policy. An enlightened state policy will not only clarify the situation but will serve as the best driving force for the forward planning elements in the fleid of air transport.

#### FUTURE OF AIR TRANSPORT

The Empire Air Conference held at Montreal and the International Air Conference held at Chicago in November 1944 have not been able to settle the degree of international co-ordination that will be required for a world order and the future of aviation will remain an uncertain factor tili the terms of peace settlement are in full harmonious operation. Until all the states engaging in aviation have reached conclusions concerning the policy they wish to adopt, any attempt to peep into the future would be unfruitful. Some kind of regulation of aviation will be necessary in both the spheres.vlz. commercial and military. With failure to achieve international co-ordination and an effective system of collective security, the world will again lanse into the pre-war era of international rivalries. The future trend appears to be in the direction of some degree of international agreement over general conditions of air navigation and technical problems associated with ft. The most likely limitation to the freedom of air will be the reservation of 'cabotage' rights which provide every government a substantial home market for its air transport. Tendencies towards bliateral and muitliateral agreements are likely to persist as the relative standing of the nations in air power is bound to vary under different geographical conditions, and reciprocal privileges under the freedom of air may prove to be of no use to small nations. Considerations of national interest and prestige rather than commercial profit may also shape the future course of commercial aviation and new commercial rivairies may emerge out of these developments.

In shaping Indian aviation policy, international trends will have, therefore, to be watched with great care and caution.



# The Schools Come

New times need new minds. To be unmodern and unscientific in mind in the post-war world of close neighbourhood and joint interests is to lack in true citicenship. But if we are to be true citizens we must begin at the beginning, and the heginning is our schools.

No school of the future can be first rate—that is, fully adequate to the need of the new times—without a modern sound-system. Eightning rapidity is given by the sound-system to speech and music. Simple to work, it "flashes" with the utmost ease radio programmes, phonograph recordings and on-the-scene

ocals to any or all rooms of the school building. Within a split-second it carries to the students any communication from the School Head and the teachers. By its help the human voice and the rausical instrument become a power in the largest anditorium. Then there is its domination of the stadium—for spreading clearly, over the high noise level, any announcement or instruction.

No school of the future must be without classroom phonographs and radios, nor must the school library hold merely books. The living word rather than



The radio will teach side by side with the schoolmaster



The library will hold books not only in cold print but also in the speaking phonograph record



Instruction will be made vivid and delightful by the classroom phonograph.



Films will give life to every subject by their quick and clear appeal to the eye

the cold dead print should be the guide. Knowledge must reach the brain through the vibrant never-tiring voice of the phonograph record. Students, just as they now consult books and documents, should be able to refer to appropriate phonograph records in which English, history, music and all other subjects lean to insistent life.

The eyes demand the food of knowledge as much as the ears. A projection room must be constructed for motion pictures and slide films, so that the march of man's mind may be seen no less than heard. Nor are eyes and ears enough for keeping abreast of that march. The hands must feel it and contribute to it in glistening laboratories with basic electronics apparatus, radio circuits, testing equipment, television installations and special gadgets for instructional purposes.

The Radio Corporation of America, with its vast 'research lahoratories and manufacturing facilities, has triumphant means of dealing with the educational field. New and improved tools, for the teaching and training of Indian youth in the post-war period, will spring from its production lines to make the mind of the future generation hright and keen and versatile and scientifically world-conscious.

R. C. A. products are the prime necessities of the Schools to Come.

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Education: Organised by R. R. Bhatio, M. A., Rural Education Offices, Birls Education Trust.

## PLANNING OF RURAL EDUCATION

H. R. BHATIA

H. R. Bhates, M. A. Pepakon, Birta Colley, Jappa, Rurat Education Officer, Birta Education Trust Canangung DO, A. Pepakon, it some of the most backward and remote parts of Recopitation and the Paught) is the author of Conf. in Education, 'The Teaching of English Spilling,' Teaching of Composition,' and Educational Prof. in Education.'

Frof Jishan has detailed the common difficulties and problems of rural education and analysed both the present position and the future possibilities of expansion. He has emphasized the need to create and maintain the valuable link between the vernacular Middle Schools and secondary High Schools area in the rural areas. His brief in the one-or-two-leacher schools is worthy of note, partiularly when he also pleads for the development of a feethique suitable for such chools so that education uple the middle stage may become possible in small villages. The senses that Prof. Bhatlo has rural are regard and villa, and his optimistic enthusians in the face of great odds is advantaged.

Executive Editor

NDIA is essentially a rural country. One-sixth of the human race lives in her villages, nine out of every ten Indians are villagers and more than ninety per cent of them are unable to read and write. Their illiteracy, coupled with their poverty and very low standard of living, with their social backwardness and cultural indigence is a blot on human civilisation and a problem of the first magnitude for any planning for a new India. The vast rural population of our country cannot be allowed to mark time when new eras of peace, prosperity and progress are being envisaged for all peoples and nations. To stir and awaken them to a new consciousness' of their rights and duties as human beings and citizens of a new India, a vigorous and speedy programme of educating them through more and better schools and teachers is our urgent need. The present provision has got to be multiplied manifold and its quality improved in the light of new trends in educational thought and practice and of

conditions prevailing in the land so that waste may be eliminated, maximum advantage taken of the provision made and the goal achieved with reasonable speed. To that end the cost of education must be assessed, the possible sociological changes must be indicated, the new ideals in rural education must be clearly understood, the new and powerful role which the rural school and the teacher are going to play to make the rural population move with the times and towards a better, more wholesome and more functional social life, must be fully realized and an effective plan for the supervision and guidance of the teaching force must be devised.

India is a vast country, with social, geographical and economic conditions varying from province to province and even from district to district. It is difficult to indicate detailed schemes suitable for particular areas. That will be the task of the various provincial and district authorities entrusted with the

administration of education. All that is here attempted is a brief outline of the principles for general guidance.

#### DIFFICULTIES

Every attempt at pianning must take due stock of difficulties that stand in the way of making education play its rightful role in rural economy and progress. In the first place, the task itself is immense, there are three hundred millions of viliagers to be educated. Secondly, this vast mass of humanity is scattered in small villages with an average of three hundred people and there are still smaller units of clusters of hamlets. Some of them are so far removed from towns as to be altogether devoid of any contact with, or nny benefit from, the minimum amenities, so .. common in modern - civilized - life. Thirdiy, this population suffers from desperate poverty and gross ignorance of improved methods of making a sufficient living through agriculture. their main occupation. Their holdings are scattered. often irrigation is not available or is insufficient. good seeds are either not known or difficult to obtain; with the result that the produce per capita is low. Generations of destitution from father to son have led them to resign their fate to custom, kismet and karma, and made them lethargic and conservative, suspicious of any innovation and instruction. Fourthly, caste and religion have divided even small communities into water-tight compartments, and have bred hatred and antagonism among them. For example, a Jat schoolmaster, will not be tolerated in a village of Thakurs or Brahmins. Co-operation under such conditions is difficult. Fifthly, health conditions in villages are appalling. Insanitary living, mainutrition, bad water-supply, lack of medical relief, faith in quacks and magic are common. And jastly, there has come about such a wide gulf between the rural and the urban people that the two cannot be recognized as the sons of the same soil. This gulf is the direct result of a definitely wrong policy pursued by the British Government in making too small a provision for the education of so vast a country-educating ten per cent of the population in a hundred and fifty years-and altogether neglecting the education of rural people in that small provision

But there is one great thing very encouraging in the face of these difficulties. The national consciousness of the country has been awakened and these difficulties which appeared insuperable a generation ago serve today only to whet the spirit of millions of men and women whose love for their country is matched only by their anxiety and impatience to remove all obstacles in the path of their country's progress. A new hope and a new ambition have entered into the spirit of the people and will be a great stand-by in the accomplishment of this stupendous task.

#### OBJECTIVES

Any programme of rural reconstruction must have two main objectives. In the first place, we must educate the rural people for a fulier life. Edu-

cation should be of the whole personality. The ideal of three R's-reading, writing and arithmetic-should be transcended by the ideal of three H's-head, hand and heart. Learning by doing, teaching through work, education through activity are some of the educational slogans and they stress that children should first do and then learn, and the joy of activity, experience and expression, which is Nature's greatest gift to the young people, should not be jost to them in education. Education should increase knowledge. develop efficiency and refine feeling. Schools should work for scholarship and independent thought, for practical sense and skill and for generosity and kindliness of feeling. Our first aim is more complete and comprehensive education, which will draw instruction from the barren tracks of knowledge for knowledge's sake to the sunny and productive region of day-today living.

In the second place, the standard of ilving must be raised. This is to be attempted in two ways. First, the adult population has got to be taught better sanitation, rules of health, co-operation, better ways of social behaviour, better personal habits, closer understanding of the political, social and economic environment, healthier and cheaper forms of entertainment and recreation. Their prejudices, obsolete customs and superstitions about food, heaith, work, faith, social relations, have got to be reformed and they have to be awakened to a new sense of values in which health, happiness and prosperity reign supreme. This item of the programme generally goes by the name of rurai uplift. Secondly, their economic lot must be improved. Agriculture is their mainstay and the methods and means of this vocation must be improved so as to increase the yield considerably. Consolidation of holdings, preserving instead of burning the valuable manure of dung and leaves, use of better seeds and better implements and more successful methods of cultivation, knowledge of afforestation and soil erosion, facilities for the transport and marketing of agricultural produce, knowledge of better methods of dairy and poultry farming, of looking after, cattle, crops and fodder, and of investment, purchase and sale, will add to the income of the viliager and bring health and happiness to every homestead. Subsidiary crafts like weaving, carpentry, smithy, preservation of fruits and vegetables, pottery and brickmaking are to be improved to yield more useful and attractive things.

Because the task is gigantic, effort and money are often wasted in trying to do everything in the same breath. It would be better to draw up a co-ordinated plan as the Wardha organisation is doing.

#### THE PRESENT POSITION

At present there are two types of schools in the countryside. In the first place, there is the single teacher school in a small village of two to five hundred souls having twenty to forty pupils. Secondly, there is the vernacular middle school having seven or eight classes with three to seven teachers. Both are purely vernacular schools imparting instruction in the subjects scheduled by education departments. Both have a rural atmosphere, do not teach English and lack

the vitalizing force of constructive activities. Here and there are anglo-vernacular middle schools, and even high schools, situated in small towns and drawing some promising pupils from neighbouring villages. The number of such schools, as has already been indicated, is hopelessly inadequate. And there are no vernacular high schools

The type of education imparted in these schools is confined to mere formal instruction in the several subjects of the curricula, and is very unsatisfactory from all points of view. The Report of the Conference of Rural Education held in the Punjab in 1922 sums up the position admirably. The pupils are dissatisfied with the schools because the instruction given is not in terms of their village life and needs and is not related to their natural interests and impulses, the methods of teaching used are formal and inefficient and the instruction given does not lead anywhere. The parents are dissatisfied because the education given is of no economic value and at best causes dissatisfaction with village conditions and leads boys to drift to the city. The educational authorities are dissatisfied, because the village schools are inefficient and lead to bad habits of study. It should not be surprising if the teachers themselves are dissatisfied, as they have no prospects and social status in the village community. Poor pay, monotonous work, lack of impetus to show better work and results, and sheer boredom of village life tell upon the teacher's mind, outlook and duties.

But some very admirable attempts are being made to vitalize rural education and bring it closer to life. The well-known Presbyterian Mission School at Moga (Punjab) working the Project or Activity curriculum has served for the last thirty years as a great radiating centre of progressive Ideas and methods In rural edu-Children get opportunities for physical activity in games, in free out-of-door play as well as in organised games; and for constructive handwork, both individual and co-operative. Handwork is used in connection with historical and geographical studies, as part of a 'project' or 'centre of interest'. The pleasure of making real things, nature study, gardening, agriculture, village crafts like charpov-making, rope-making, masonwork, all bave an appeal and educational value for young people and are linked with study and instruction. The study and appreclation of literature is taught through children's pleasure in speech, in dramatic activity, their delight in verse and rhythm, Music-singing and listeningis given its due place, and arithmetic is taught by calculations in the farm shop, in running a mess, in finding out railway fares from one station to another during railway journeys, in estimating returns from the farm and the kitchen garden. Language is taught by the sentence method as is actually learnt in life. The school also runs a training class for village teachers and they are trained in matters relating to the uplift of villages as well as in the project method of education.

Recently the Basic Schools started under the Wardha Scheme are another laudable, attempt-to reconstruct the ideals and methods of rural education in India. All instruction is centred round some craft. In learning which pupils acquire a knowledge of language, arithmetic, history, geography and drawing. These subjects are after all tools with which we meet the needs of life and they are branches of our cultural herltage. But in differentiating them into so many units we have missed their unity. The Wardha Scheme correlates or integrates them by means of a craft in which the urgent manipulative and creative interests and impulses of children find full scope for expression, exercise and development. Young people acquire knowledge and skill and learn to use both to advantage in life. The educational philosophy of the project method and the "basic" education is the same. the only difference being that in the latter, instead of a number of projects, the convening point for subjects of study is some useful craft like spinning and weaving, carpentry and agriculture. The Wardha Scheme has revolutionised our outlook, methods, ideals and policies in education and, although it has been vehemently criticised from many quarters, its cardinal principle of education through constructive and creative activities and interests has been not only welcomed and accepted but also incorporated by all educational authorities, central and provincial, in their schemes of educational reconstruction and planning. These pioneer methods and schools are a very wholesome influence for the orthodox educational thought and practice, but their number is small in view of the immensity of the task.

#### SOME POST-WAR CHANGES

Because India is essentially a rural country and because there has come about a wide gulf between the rural and the urban people, it is often suggested that there should be a sharp line of distinction between educational effort and service rendered to rural and urban areas, there should be different types of schools and different curricula, and teachers should be differently trained. But lest this gulf should go on widening, the grounds of such differentiation must be clearly understood, the need of clear thinking and careful planning fully recognised and post-war changes that are inevitably coming provided for.

At the outset it should not be missed that with the growing industrialization of India there will be an unprecedented migration of rural people to the cities. Three generations ago the United States and Japan were essentially rural, almost ninety per cent of their people lived in willages. Today more than half of their people live in urban areas. Australia in a relatively small period of time has experienced more acutely this drift of large rural populations to cities. This drift thas begun in India for ail practical purposes. Secondly, the birth-rate in large cities is appreciably lower and goes on increasing in proportion to the distance from towns. The cities all over the world are no longer able to produce enough children to maintain a stationary population. Rural areas have to function

as the seedbeds of the nation. Thirdly, with the inevitable growth of large cities there will be a continual flux of people into rural areas for recreation and health. Fourthly, country-wide democratic institutions will ever be throwing the urban candidate on the help and support of his rural constituencies and there will be a greater commingling between the two. Lastly, large scale building of roads and improvement in the means of transport, commercial, cultural and social intercourse between cities and villages will increase immensely and much more readily.

These changes will have an important corollary which no educational planning can afford to overlook. Education alone can help to make such changes less sudden and to bridge the gulf between the rural and the urban people. So far as general education is concerned, the methods used in developing interest in art, history, music, literature, science and other subjects of common study shall have to be identical in both rural and urban schools. But that does not imply that agriculture can be ignored. It is indispensable, a virile and prosperous rural community is essential for national well-being and a love of country life is to be encouraged and fostered in the rising generation both in towns and villages. That is not because children are to be kept in the countryside to work on land but because the aims and ideals of all education, including rural education, are to be broadened in the interest of individual and social development. The cultural life of the nation will have to be made much richer so that several types of community life may find scope for expression and growth in it, and while the general underlying principle of education will remain the same, slight changes in extra-curricular activities and interests and in social life will come in to meet local conditions.

There will also grow semi-rural communities living close to, and meeting the demands of, the urban population for dairy and farm products. Their ways of life and outlook will be partially urban and partially rural. Post-war educational service will have to be adapted to such powerful needs.

# TENDENCIES IN RURAL EDUCATION

There are two distinct tendencies noticeable in rural education today and both revolve round the place and value of the one-or-two-teacher school in a small village. The first condemns this small school as an educational dodo. It is inadequately equipped and uneconomical, and is a "potent cause of wastage". "The sooner it is replaced by large central schools fed from larger areas, the better-for they will allow of better accommodation and equipment, more and better paid teachers and a wider range of subjects and interests". The Government of India Report on Education in India during 1938-39 says, "An Inspector of Schools in the Punjab has made the suggestion that uneconomical single-teacher schools might be closed down after due warning, and the staff, thus released, employed elsewhere and that, where distances are not prohibitive, two or three singic-teacher schools should be coalesced into one larger school and further that the single-teacher schools for boys should be converted

into mixed schools with two or more teachers" (p. 60). But the same report adds "What is in theory a sound proposition is likely to remain a plous hope". It is commonly believed that real efficiency cannot be looked for in the one-teacher school.

The second tendency is to look upon the singicteacher school as indispensable, to exploit its peculiar daviantages and to remodel it into something more in accordance with the modern spirit. It is claimed that, given the right type of equipment and an enrolment of between 20 and 30 pupils, a high grade of education can be had in these schools. Since India will need both types of schools, let us consider the scope and merit of both separately.

# ONE-OR-TWO-TEACHER SCHOOL

Most of our village schools are single-teacher schools. Official reports admit that in a country of small and scattered villages it is difficult to reduce their numbers and impossible to do without them altogether. About 41.9 per cent of the total number of primary schools in India are single-teacher schools and their number is on the increase. Every effort to extend educational facilities to small villages means more single-teacher schools. In a province like Rajputana where small villages with a population of 200 souls are common, numerous and far removed from each other, single-teacher schools are about the only means of bringing education within the reach of the rural masses. In the near future when educational provision shall have to be made on a very large scale to reach every hamlet and village, the single-teacher schools will prove very useful. It would be very sad indeed if modern education were altogether impossible in such schools. But Is it?

The critics of the one-teacher school generally stress three difficulties. In the first place, it has a wide range of age and ability levels, and classes are difficult to form. Secondly, the subjects to be taught by one teacher are so numerous that he cannot be expected to do justice to teaching. Thirdly, the classes, if formed, will be so small that social stimulation which is the crux of class-room teaching will be very deficient.

In the United States there are still 160,000 oneteacher schools teaching well over 4,000,000 rural children. This means that one out of every four children in villages is getting education at such schools. Prof. F. W. Dunn of the Columbia University tells us on the basis of her experience of rural schools that difficulties "are removed or lessened to the point of practicability" if subjects are integrated or correlated in units of study or activity and when several grade levels participate in a common enterprise. "For ten years in our experimental rural schools we have found it possible to organise our school in three groups, rather than in eight grades, thus giving the teacher time to be a genuine guide and helper, and making possible for each child a group with which to work or play that is sufficiently large to be interesting, stimulating and productive of genuine social experience of give and take, leadership

and followership, co-operation and control". (From an article in the "New Era", April, 1938).

She further enumerates the important techniques required of the teacher for present-day education in the one-teacher rural school. In the first place, the teacher should be able to participate in group discussions as a member of the group, taking the lead only if the group's need for guidance requires lt. Secondiv, he should be able to handle a heterogenous group of children as one class. Thirdly, he should be shie to subordinate the so-called 'recitation' to the independent study of the pupils; the pupils' study must go on at times when the teacher's attention is demanded for class work with another group. Fourthly, the school management is to be organised so as to be definitely educative. This is possible if the teacher makes use of his opportunities to organise decoration of the school room, beautification of the school environment, gardening, play and the like. And, fifthly, he must recognise that individual instruction is more serviceable than class work on a common problem.

Prof. Dunn sums up: "With these techniques, and with the ever-dominating concept of the school as a place for helping each child to grow along the best lines and at his best rate, the small rural school becomes an organic agency of a high type for wholesome child development;"

It is highly desirable that such small rural schools should have closer relationship to the village community. The teacher should know every family and visit every home, he should promote the general understanding, appreciation and support of education among parents and organise parents' meetings when necessary, he should let the village use the school building after school hours for discussing village affairs and himself take a leading part in discussions and he should organise fairs, sports and exhibitions with the help of villagers.

Our country with her teeming millions residing in small villages must investigate very closely into the needs, methods and aims of the one-teacher school and find ways and means to make it more efficient.

#### THE VERNACULAR HIGH SCHOOL

The highest education given in villages is through what are commonly known as the vernacular final schools. They teach upto the middle standard and. except in the Punjab and United Provinces, are gradually disappearing. They differ from the common type of middle schools in not teaching English. Their teachers are poorly paid, iii qualified and untrained but their products in Northern India grow into useful members of rural communities. The Education Report of the United Provinces 1934-35 bears testimony to that truth. "There can be little doubt that vernacular education is the most efficient and valuable section of the educational system of these provinces. For a sum commensurate with the income of the parent a boy receives an education in most of the subjects that he is likely to need on leaving the school. The school is in or near the village, the course is designed for the village life." In the Punjab, agriculture is being introduced in such schools and senior vernacular teachers are trained at the arricultural college.

But it is very tragic that in India there are no institutions worth the name where secondary or higher education may be provided in the vernacular and the products of vernacular middle schools are compelled for want of opportunities to stop their studies. They cannot join the anglo-vernacular high schools where the study of English is compulsory.

For some time past there has been growing a great popular demand for imparting all instruction at the high school stage through the medium of the vernacular and in a number of provinces it is being done. Even at the university stage there is a feeling that a beginning ought to be made at least with some subjects to carry on teaching through the vernacular. This tendency is to be welcomed for political and educational reasons. It will help to bridge the gulf between urban and rural masses and it will give young people greater opportunities for free and creative self-expression.

With the growing vernacularisation of high school and intermediate education the vernacular middle school will open up a promising field for development. Given due encouragement and support, with better qualified and trained teachers, better and more equipment, and with teaching work linked with village conditions and needs it should in due course of time step up secondary education in rural areas. The brighter pupils will have no obstacle to taking the matriculation examination or even college education and will later work as effective leaders of a progressive community.

At present the vernacular middle school serves as the central school for a number of villages having one-or-two-teacher schools. But if each village has a one-or-two-teacher middle school on the lines suggested above, there should be set up central high schools where along with opportunities for secondary education both on the arts and the craft sides a greater stress should be laid on village occupations.

The only difficulty for central schools is of transport. But with the post-war programme of roads and cheap means of transport, the difficulty will be overcome. One authority in England has established a central school which draws its senior pupils from an area of sixty-six square miles. "Of the 119 senior pupils on the roll of the school, drawn from nine contributory schools, 92 are conveyed in four buses, which pick up the children along the whole of the routes Arrangements have been made for the children to shelter in wet weather. The majority of children are picked up near their homes and it has been found that children can now be conveyed a distance of several miles to a senior school in less time than it took them to walk from home to their village school."

<sup>\*</sup> Modern Trends in Faucation, page 411

### THE CURRICULA

It is through a criticism of the present curricula that a new one is to be forged. At present we have a number of subjects which are related neither to one another nor to the needs and interests of children. Also, there are too many of them and children are eling taught a large number of unnecessary, uninteresting and unimportant details. The curriculum is formal, artificial and divorced from life. There is no relation between life in the school and life outside it. Throughout the emphasis is on what the child will need when he grows up and not on what he needs here and now in the school. Education is considered a preparation for life while it is life itself pulsating with the growing needs and interests of children.

The new curriculum must steer clear of these shortcomings. The fundamental items of reading, writing and arithmetic cannot be neglected but they must be supplemented by craftwork, music, social studies and games. The Wardha Scheme with slight adjustments to suit local conditions can be adopted with advantage. Knowledge of agriculture will be had at the school farm, and hygiene, civics, sanitation, first aid, folk music and drama can be taught through daily activities in and outside the school. For girls sewing, domestic economy and child welfare have to be included. The change should be radical not only in the content but also in the methods of instruction.

# THE TEACHER

The old saying: "As is the teacher, so is the pupil" is as true today as it was in the past. Much of the waste in modern educational effort in India can reasonably be traced to the incompetence of the teacher. The teacher in the country is still worse. His greatest handleap is his poor salary. Ill-fed, worried, retreating, without any social status and without any hope of improving it, he is expected at once to play a role that is noble and to lead the rural community towards greater literacy, better health, cleaner living, and better social conditions. This is expecting mangoes from cotton seeds.

The whole programme of rural education and uplift turns on the teacher. He is in fact the only factor which can radiate light in the present gloom. He must be better pald, better educated and better trained He must have prospects of promotion and the confidence that better work will bring higher dividends in the form of both material advantage and social appreciation.

### THE COST

There are 3,13,20,000 children between 6-11 years in rural areas in British India and 86,86,000 in Indian States. Assuming as the Central Advisory Board of Education in its Report on Post-War Educational Development in India has done that one teacher will be required for every 30 pupils, the number of teachers required will be 10,44,000 for British India and 2,89,533 for the Indian States. The Central Advisory Board prescribes a minimum national scale of salaries for teachers in primary schools at Rs. 30 Increasing upto Rs. 50 p.m. The cost on teachers' salaries and allow-

ances comes to Rs. 68,08,57,650 in British India and Rs. 16,88,22,565 in the Indian States. Calculating that the salary cost amounts to only 70% of the total cost, an additional sum of Rs. 29,17,96,136 will be needed for British India and Rs. 8,09,23,956 for the Indian States. The gross total cost per annum comes to Rs. 97,2653,786 for British India and Rs. 26,97,46,521 for the Indian States. The Agencies are included in the figures given for the Indian States. Since primary education in rural areas has got to be free, there is no prospect of income from any source.

The cost per capita comes to Rs. 31.05 per annum. Where one-teacher middle schools are to be run, the cost will be a little higher as the teacher must be better qualified and better paid and the equipment in library etc. will have to be improved.

### PRIVATE ENTERPRISE

In India, teaching is not merely a vocation but also a social and religious service, and there is a time-honoured tradition that knowledge and learning are not marketable commodities which can be sold and purchased for a fee. The teacher in Hindu and Muslim times never thought of earning a living by his work and taught the rich and the poor alike for a voluntary bounty. That tradition still survives and there are a large number of public organisations enlisting voluntary workers for imparting instruction free to the backward communities or engaging them on a living wage to render educational service to rural masses. Their achievements in liquidating illiteracy and uplifting the people are noteworthy. Wardha, under the Inspiring guidance of Mahatma Gandhi, and Shantiniketan are some of the sced-beds of social service organisations whose soie aim is to improve the lot of village communities through programmes of education at once educational, social and economic.

The Birla Education Trust, Pilani, Jaipur State, is maintaining 400 schools in villages with a total enrolment of 13,000 pupils. Shrimati Kasturba National Memorial Trust is drawing up a very comprehensive scheme for rural education and uplift with special reference to women. As political consciousness grows, such efforts will muitiply. Social service leagues and societies are being formed in secondary schools and colleges and many universitles are contemplating that social service, particularly educational, in rural areas, should be expected of every prospective graduate and his achievement, if any, should be mentioned in his university diploma. A move making some sort of educational service compulsory will not be an unjust demand on the time and effort of young students, considering that other countries have been conscripting students for military service.

Ideals of social service are becoming more definite and concrete, efforts will become more genuine and organised with our political progress and, in any programme of educational service to the rural communities, will figure as the most important item. When national government concentrates on rural education within a short period from now, it is

## 15 Years Ahead

not too much to hope that public help and cooperation will be available in an amount and degree seldom observed in any other country. If the cost of rural education is heavy and depressing, the ideals and spirit of social service among the Indian people are heartening and will make up considerable ieeway. As the Sargent Report says, "the experience of war suggests that when such a paramount, necessity

can be established, the money required to meet it can and will be found. It is for India to decide whether the time has arrived when a national system of education is a paramount necessity." The results achieved by the Danish People's High Schools and the Summer School Movement in England are an eloquent testimony to what voluntary organisation and popular effort can accomplish in rural uplift and education.

# PRIMARY EDUCATION

· A. N. BASTI

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In the article below, Irof. Base maker a very realistic approach to the problem of Permary Education in India. After enquiring into the causes of weatoge and stagnation at the primary stage and of the failure of various Firmary Education Acts, he suggest very thoughly proching measures, with a view both to unprove upon the present system and to adapt it to the special conditions of India. His analysis of the Wardha Scheme and the Surpent Report is most illuminating. He has also offered very valuable suggestions regarding the short lever plan for the liquidation of thickness joint lates.

T does not require a prophet to say that, in the field of reconstruction in the next fifteen years. major attention will be paid to education, and that here our efforts will be mainly devoted to the task of building up a nation-wide and efficient system of primary education which will serve as a sure and sound foundation for the entire educational structure Hitherto, primary education in this country has been the most neglected part of our educational system and its progress up till now has been woefully meagre. As a result, the Indian educational structure to-day resembles more or less an inverted pyramid. This has been due, as we ail know, to the unequal emphasis that was laid in the last one hundred years on secondary and higher education to the exclusion of mass education. If, like all other civilised countries of the world, we in India are to have a national system of education, then we must correct that wrong emphasis and remedy the defects of the past, we must begin by building the foundation and make education truly national in extent as well as content. Education in India has too long been the privilege and prerogative of the rich and the few, it must now be open and available to all, irrespective of caste, creed, sex or station in life. We must recognise that education is the birthright of every Indian and we must make provision for unlversal education in our planning of future India.

It is an admitted fact that in the past there has been too much neglect. Our job in the immediate future will, therefore, be to make amends for that neglect and to try to make up for the lost time. How shall we set about the task? Before we discuss that,

it would be helpful to take stock of the present situation.

# THE PRESENT POSITION - Administration

The administration of primary education is at present in the hands of local authorities. These local authorities may either be the District Board (in urban areas, the Municipal Board) or, as in some Provinces, a statutory "ad hoc" body like the District Board created by an Act of the provincial legislature. These local bodies administer primary education in their respective areas. They maintain their own schools, appoint their teachers, prescribe the courses and text books and take any other step that may be necessary for the maintenance of the system; and they have complete authority in their management. They also give grants to privately managed institutions over which, however, they have very little control. There are also privately managed schools which receive no ald from any quarter, their only source of income being the tuition-fee paid by their pupils.

The position of the Local Government vis-a-vis these local bodies are more or less of an advisory nature. The Local Government give grants to the local bodies to supplement their financial resources, but otherwise they do not generally interfere with their internal administration. In some provinces the Government also provide the inspecting staff for primary schools the members of which act as Ilaison officers between the Provincial Government and the local bodies. On the whole, however, the Provincial Governments exercise very little control over the affairs of the local bodies Years ago the Government decided as a matter of policy to withdraw

from the field of primary education and leave it to the local bodies and to voluntary agencies. So it came about that the responsibility of providing education to the masses came to be divided between the local bodies, the District and Municipal Boards, and private agencies. The Government did not take any direct responsibility though they gave grants to local bodies to help them in their programme of work.

The main responsibility for providing mass education thus devolved upon these local authorities. They and the voluntary agencies between them today maintain by far the largest number of primary schools though there are a few Government schools. According to the latest available returns. there were in British India, in 1936-37, 197,227 primary schools. Of these only 2,666 were Government institutions; the Board schools were 72,363 in number while the number of private schools was 122,198 It would appear from the above that primary education in India is still too largely dependent on voluntary agencies for its progress. The number of schools directly under State management is negligible and more than sixty per cent of schools are under private management.

The following paragraph taken from the Eleventh Quinquennial Review of the Progress of Education in India gives a fair picture of the present position of the various types of primary schools in existence today:

"The primary schools administered by Government are on the whole more efficient than those managed by local bodies or private agencies. In certain provinces the majority of the primary schools maintained by Government are practising schools attached to training schools for primary school teachers. Grants are also given to local bodies by Government toward the expenses of primary education and the local bodies in turn make grants to aided primary schools. The grant-in-aid given to such aided schools is seldom adequate, with the result that they are generally ill-staffed and ili-equipped. In some cases the grant is as small as eight annas a month. It is unfortunate that the local bodies have not hitherto done as much as they might to improve the efficiency of primary education in the areas under their control, though there are welcome signs here and there of attempts to improve the state of affairs in this respect".

In the course of the last twenty-five years many attempts have been made to improve the condition of primary education. Various Primary Education Acts have been passed in the different provincial legislatures. Their main object has been to strengthen the position of the local authorities. These Acts give powers to those local authorities. These Acts give powers to those local authorities to introduce at their option a compulsory system of elementary education in their respective areas for children (in most Acts the provision is for boys only) between the ages of six and ten. They also empower the local authorities to impose an education cess to finance the cost of

maintaining the system. There is, besides, provision for statutory grants from the provincial exchequer to supplement the resources of the local authorities. But in splte of all these efforts the progress of primary education has been extremely slow. In 1936-37 there were in British India about six crores of children of the school-going age (i.e. in the 5-14 age group); of these only 1.2 crores, l. e., about one-fifth, were under instruction. And in 1940-41, that is, almost twenty years after the passing of the Primary Education Acts\* there were in the whole of British India 194 urban areas in all and 3,297 rural areas where some sort of compulsion has been in force. These three thousand and odd rural areas comprise in all about fifteen thousand villages; and in India there are seven takhs of such viliages t

The causes of the failure of the local authorities to implement the provision of the Primary Education Acts and to build up a well-organised compulsory system of primary education are not far to seek, Firstly, we may note that under the provisions of the Primary Education Acts the option of introducing compulsion rested with the local authorities. There was no provision in them for a central directive authority. Secondly, the Imposition of the education cess was also left to the option of the local authorities. One who knows anything about these Boards can easily imagine what may have been the result of such option. No elective body, specially of the type of these District and Municipal Boards, would care to introduce a new cess and face unpopularity and risk defeat in elections, and virtual extinction at the hands of the electors. And in the absence of fresh sources of revenue and with their existing financial resources it is no wonder that the Primary Education Acts have remained up till now more or less a dead letter. The fate of compulsion under such circumstances was naturally sealed and a universal system of compulsory primary education stlii remains an unfulfilled dream of educationists and politicians,

# FINANCE

In 1935-37 the total amount spent on education of all types in British India was a little over Rs. 28 crores. Of this, 8.4 crores was for primary education. So the share of primary education in the total educational budget was just about 30 per cent. It would appear from the above that we in this country are even today spending on an average less than 2 rupees per capita for primary education. It is better not to compare this figure with figures for other countries. It is only natural that, with such poor financial backing, the provision for primary 'education in this country is so utterly inadequate and its condition so extremely inefficient.

It is interesting to note that of the total of 8.4 crores spent on primary education about 7 crores were for boys aione and only 1.4 crores for girls' education. This shows clearly the disproportionate

A large majority of them were passed within a few years after the introduction of the new constitution in 1919.

:nature of the expenditure on the education of boys :and girls.

An analysis of the sources of expenditure is revealing. There are, generally speaking four main heads from which the amount spent on primary education is derived: (i) provincial exchequer; (ii) Board funds; (iii) fees; and (iv) endowments and other, sources. As we have already seen, besides directly maintaining a limited number of schools. the Provinciai Governments give grants to local authorities for meeting the expenses of primary education in their areas. The Board funds are made up of such grants set apart from their own general funds for the purposes of education. Where education cess exists, as it does in a ilmited number of areas, the cess provides the largest amount in the Board fund for primary education. In 1936-37, of the total of 7 crores spent on primary education of boys, Government funds provided 3.45 crores, Board funds, 2.4 crores, while the amount met by fees was 46 crores, other sources being responsible for .67 crores.; The percentage works out as follows: - Government funds 49.3, Board funds 34.4, fees 6.6 and other sources 9.6. It would appear that fees and other sources even now account for more than 16% of the total expenditure. In a poor country like ours this is undoubtedly a heavy burden on parents, specially when we remember that poverty has been a great stumbling block in the progress of primary education in this country. In this connection one other fact need be mentioned. Some of the Primary Education Acts, while making education compulsory, have not made it free As a resuit, in some areas where compulsion has been introduced the parents, besides paying the cess, have also to pay the tuition fees of their children.

# ENROLMENT AND ATTENDANCE

The total number of pupils in primary stage in 1936-37 in the whole of British India was 11,465,700. Of these, 10,00,190 were boys and 1,455,510 girls. The disparity in the number of boys and girls is indeed striking. The explanation lies in the fact that in spite of the marked progress of girls' education in recent years the education of girls is not yet recognised to be as imperative a necessity as that of boys.

In the absence of compulsion, attendance in schools is on a voluntary basis; that is, children go to school when their guardians feel inclined to send them there and they remain at school as long as they feel inclined to do so or so long as it is not inconvenient to their guardians to keep them there. As I have already stated, one result of this has been that, in 1936-37, out of about six crores of children who should have received instruction, only about 1.2 crores were in attendance at school of some sort or other. Perhaps at first sight the situation would not appear to be very bad; but when we note that a majority of these children were in class I and left school in a year or two without proceeding further, then alone the true state of affairs reveals itself and we not only

see the terrible wastage of time, money and human material that is going on all around us but we also realise the magnitude of the task that lies ahead of us in its true perspective.

### WASTAGE AND STAGNATION

In 1935-37, of the 1.2 crores of children under instruction, 51,9 lakhs were in class 1, 23.1 lakhs in class II, 12.1 lakhs in class IV, 12.1 lakhs in class IV, and only 7 lakhs in class V. The percentage (taking the enrolment in class I as 100) works out as follows:

These figures clearly indicate the amount and extent of wayside dropping at every class all through the primary course. Such dropping is specially marked after class I. Higher up, it gradually decreases, but nowhere it is negligible. It would appear that more than half the children in class I fail to obtain promotion and never go beyond that class. They stagnate there without any advantage to them, but often impeding the progress of others; and after a year or two they leave school without having obtained any return for the time and energy spent by them or on them. This is the saddest feature of our primary education system.

Another disquieting feature is that, out of the children who joined class I, less than one-fourth remained in school for four years, I. e., long enough to reach the estilest stage at which permanent literacy—to say nothing of other more important educational objectives—is likely to be attained. In terms of economics it means that over 80% of our educational expenditure on primary education is simply wasted.

#### CAUSES OF WASTAGE AND INEFFICIENCY

Many are the causes that have been suggested to explain this appailing wastage in our primary system. Incompetent teaching, existence of a large number of inefficient and incomplete single-teacher schools, defective curriculum, irregular admission and attendance, heterogeneous classes, iack of proper equipment and accommodation; all these have contributed to the wastage; but the main causes are undoubtedly the poverty of the people and, more than anything else, the absence of compulsion.

The teacher is the pivot of any educational system. On him rests the failure or success of the system. If he is himself well-educated and trained and if he is intellectually alive and keen on his job then success is ensured; but if on the other hand he himself lacks education and training and if he cannot keep his heart in his job, then the system is bound to fail. In this country, such has been the case specially in the field of primary education. In many parts of the country the initial educational qualification for a teacher in primary schools is extremely low, sometimes it is no more than the middle standard.

<sup>†</sup> Corresponding figures for girls, primary education are not available

In the case of girls only the proportion is lower still. There we find that for every 100 girls who entered class I only 14 remained to reach class IV.

In some cases it is even below that. There are many teachers who themselves have not gone beyond the primary stage. It is difficult if not impossible to expect good work from them.

Teaching in primary schools has not yet attained the status of a profession in India. The pay and prospects of our primary school teachers are, as is well known, dismally poor. Most of them are not even paid a bare living wage. Not many years ago the average pay of a primary school teacher in one blg province was rupees six only. Of fate the situation has improved to some extent but even now the average pay of primary teachers in private schools is not much more than Rs. 10/- per month. Under such circumstances it is futile to expect that a better set of people with better educational qualifications will be attracted to the profession and take up teaching as their life's vocation So teaching has become the last haven and refuge for all those who have failed in other walks of life or who lack initiative enough to try their luck elsewhere. The result is that a great majority of schools are staffed by men whose failure has soured their outlook in life which poverty and low status in society have further emblttered, men who have very little zest left in them and who feel no joy or sense of calling in the profession they have been forced to adopt out of necessity. It is, therefore, not at all surprising that the teaching imparted in most of our primary schools is extremely inefficient and ineffective.

The fact is not widely known that nearly fifty per cent of the primary schools in Fiftish India are schools which have only one teacher on their staff. It has been found that wastage and stagnation are greatest in single-teacher schools. Of course, India being a land of small villages, it will never be possible to eliminate completely such single-teacher schools. Even in advanced countries like the United States there are many such schools; but whereas there exist there are many such schools; but whereas there exist other alleviating factors which tend to minimise the defects of the system in those countries, in India such factors are completely absent.

# IRREGULAR ADMISSION AND ATTENDANCE

The heterogeneous character of the population in an average primary school is further emphasised and strengthened because of two other factors, irregular admission and poor attendance. There are practically no fixed terms in our primary schools; children are admitted almost at all times during the year and they come with all sorts of intellectual background. And not only that; in the absence of any definite age for compulsion, children of all ages are admitted into school, thus adding to the mixed nature of the classes and increasing thereby the difficulties for the poor teachers. An institution which depends to a large extent on fee income, however meagre that may be. can iii afford to displease a guardian and decline to admit his ward because of either over-age or under-age. The result is that in class I we shall find children of all ages, from 4 to 10. And they are at ail stages of progress. Under the existing circum-

stances that can only lead to inefficient teaching and to stagnation and wastage.

# LACK OF ACCOMMODATION AND EQUIPMENT

A school of that type under an incompetentteacher can hardly be an attractive place for growing children. An average Indian primary school is indeed a dull and dreary place. This is true in the physical as well as the spiritual sense. I am not complaining of the lack of good buildings and expensive teaching equipment which one finds in the primary schools in Western countries and which enliven the life of the children in those schools. But there is a minimum standard in these respects and even that is lacking in most of our schools. A great majority of them have practically no building of their own, not to speak of equipment and amenities like gardens and playing fields.

### DEFECTIVE CURRICULUM

One peculiar characteristic of our primary curriculum is that in spite of many attempted reforms and innovations the present curriculum is more or iess a miniature replica of the secondary course, just as narrowly theoretical and bookish as the latter. Not only are the same subjects studied and similar courses and books prescribed, but also the same methods followed. It has neither the economic advantages of the secondary course which leads to some vocation nor any direct utilitarian value to the pupils or their parents because of its divorce from life and its unpractical nature. So, many a parent finds littleincentive to send his children, to a primary school, specially If he knows that he cannot keep them in school long enough to complete at least the secondary course

### POVERTY

It has been said that one of the main causes of the failure of the present system of primary education in this country has been the poverty of its people. Poverty has bred ignorance and there is, among the masses, a consequent lack of appreciation of the values and advantages of education. It is not always realised how true this has been. In the present economic conditions of the people the few pieces of copper that a child may earn by looking after the cattle or doing some such work are a welcome addition to the family budget. There is some divergence of opinion about the average per capita annual income in India. According to some, it is only sixtyfive rupees. For the majority of people it is no more than rupees thirty. If then a child earns one or two rupees in the year, it comes as a substantial sum. Under the circumstances, if the poor peasants and labourers are reluctant to sacrifice any contribution from that quarter, they can hardly be biamed.

#### COMPULSION

Willing and properly educated parental cooperation is the best substitute for compulsion. But such co-operation is not always and readily available. It is then that the question of compulsion arises. Compulsion is the only effective remedy for many of

the existing defects. It alone can ensure regular attendance and prevent wastage. At one time our educational administrators used to fight shy of the idea of compulsion and many were the substitute remedies suggested by them. Now, however, we have come to realise that in the field of primary education there are no short cuts in the matter of compulsion. that neither economy nor efficiency can be attained without recourse to it. If we are to have an efficient system of primary education, we must have compulsion which alone can stop wastage, eliminate uncconomic Investment in incompetent and incomplete schools, and ensure some measure of efficiency. It has now been admitted that compuision is an economy and not a luxury which must wait for better times. We have already seen how, owing to defective legisiation, compulsion could not be enforced on any extensive scale. The defect jay not so much in the wording of the legislation as in the spirit behind it. As a result the local authorities who were made responsible for organising primary education falled in their charge. The absence of a central directive authority further complicated the situation. It has now become practically obvious that the enforcement of compulsion can no ionger be left to the option of the local authorities and that the entire machinery for the administration of primary education should be thoroughly overhauled and recast. The new machinery set up must be characterised by greater centralisation, specially in the matter of initiation and direction. The position of the local authorities vis-a-vis such more centralised authority will then have to be carefully and clearly laid down.

And if primary education is going to be made compulsory, it must, at the same time, be made free. Compulsory education is everywhere free and in a poor country like our where the poverty of the people has stood in the way of the progress of education, there is no justification for making it otherwise. Primary education is not a luxury but a national investment and so we want to make compulsory provision for it. Were it not so, then perhaps there might be some justification for charging fees.

Incidentally, another weakness in the present system of financing education may be pointed out, for, the whole question of primary education is, really speaking, a matter of finance. Under the new constitution education is a provincial 'matter, and the Central Government have no responsibility about it. And yet all the expansible sources of national income are under the control of the 'Central' Government while practically all the major items of expenditure (excepting defence) are ieft to the Provincial Governments whose sources of revenue are, even under the best of conditions, extremely limited. Such inequitable financial arrangement has been responsible, not to a little extent, for the slow progress of all nation-building activities including education.

7. The only feasible solution of the present deadlock seems to be that the provision of a national system of education (by which I here mean the system

of universal primary education) should be the direct responsibility of the Central Government which should finance the entire scheme. The Provincial Governments will, in the matter of primary education, then act as agents of the Central Government. The present constitution of the Provincial Government-offers an additional reason in support of the above suggestion. Experience has it that in the past they have generally shown a lack of courage to initiate a bold programme of expansion and consolidation. Their financial weakness, to which reference has been made, has no doubt been the chief cause for this lack of courage and initiative. But whatever may have been the cause or causes, the result has been that today in India we are left with an extremely inefficient system of primary education

### THE FUTURE

Our task for the future is then a thorough and complete reorganisation and reorientation of the system of primary education in the land. The first step in that reorganisation will be the introduction of compulsion and the setting-up of an appropriate and efficient administrative machinery. Our second step will be to reconstruct the entire contents and methods of primary education. This would mean not only a radical reform of the curriculum and methods of instruction in primary schools but also a reorientation of the atmosphere which pervades there. An essential part, if it is not the most essential part, of our programme will be to recruit and train a new type of teachers for primary schools who will take up their work in that spirit and with that devotion which it demands and deserves. Such is the outline of the task which now lies ahead of us.

Fortunately, we have now before us two schemes of educational reconstruction much along the lines we have here laid down which may guide us in our efforts. I refer to the scheme of Basic national education sponsored by Gandhiji and the scheme contained in the report of the Central Advisory Board of Education on post-war educational reconstruction

The scheme of Basic education is perhaps the most significant and radical attempt so far made to reconstruct primary education on an entirely new basis. Apart from the fact that it, for the first time, boldly recommended a free and compulsory universal - primary education extending over a period not of 4 or 5 years but 7 years, its chief contribution lies in offering us an entirely new ideology of primary education. .The fundamental concepts of basic education are activity-education and education for a co-operative social order. Education must centre round some activity which will at once be related to the basic interests of the child mind and to the basic occupations of the community life. It must release the creative energies of the child along channels of productive and socially useful activity. This is the idea of craft-centred education Moreover, education must also lead to a correct appraisal and understanding of social problems and development of social

habits and attitudes.§ Education must teach our children to live and work together for the common good and thus help them to build a new social order where co-operation and not competition will be the guiding principle in life.

One word more about the idea of craft-centered education. Its primary object is not the production of craftsmen. The idea here is that the resources implicit in craft work are to be exploited fully for educative purposes. The craft will not be just another subject like manual training; it is the centre round which other subjects will be woven in a correlated manner. It has been aptly said that here a craft instead of books becomes the medium of instruction, As the child takes up the craft work and practices it (and there is no doubt that because of the inherent iove of activity a child will take to a craft more readily than he takes to books) problems will arise which he will be called upon to understand and solve. In the course of doing this he will be tactfully, unobtrusively and gradually led by the teacher into the domains of arithmetic, history, geography, science and other school subjects. Such an Introduction to subjects will not only be logical and psychological but also natural: and the motivation to learning under such circumstances is clear and imperative. It comes from within the child and with it are associated his instructs and emotions, the mainspring of all action. There can be no better atmosphere for effective iearning than this.

The method by which the different subjects are to be related to the craft activity and arrong themselves is that of correlation. This method of correlation tends to preserve the unity of knowledge which is so essential in the education of young children Here education starts as an active process of integration of knowledge and it proceeds further and further through greater and wider integration. Further, knowledge attained through activity is practical and applied knowledge. Such knowledge is easily transferred from school situations to life situations.

Moreover, craft work offers ample opportunities for group activities which will lead to the formation of co-operative social habits. Socially useful and productive group activities offer the best trailing ground for morals and citizenship. Nothing can substitute them. Furthermore, craft work being a link between the school and the community, a close relationship is established through it between the school and and society. Such a close relationship between the work done at school and the work of the community enables the children to carry the outlook and attitudes acquired in the school environment over to the wider world outside.

On the above principles a complete and detailed syllabus of studies for seven years has been developed. Gandhiji claims that pupils who go through this syllabus will attain a standard which will be equivalent to the present matriculation standard, excepting in English for which there is no provision in the Basic syllabus. There its place is taken by Hindusthani asour national language.

The entire scheme of Basic education may appear to be highly theoretical and unworkable in practice. But experiments on the lines of the scheme have been made during the last six years, l. e., ever since its inception. In different parts of the country, and they have shown that such fears are groundless. There are difficulties, specially on account of the lack of suitable teachers; but these difficulties are common to all schemes, old and new. The experiments have also proved that some of the other criticisms of the scheme were equally unfounded. For example, strong exception was taken to the self-supporting Idea contained In the scheme; It was thought that this might lead to forced child labour. But we have seen that it does not do anything of the kind. Incidentally, many people do not realise that the original idea of selfsupport was toned down to some extent when the details of the scheme were worked out.

The scheme of Basic education was launched in 1938. The Provincial Governments at that time took It up with great zest. Soon, however, there was a change and the scheme lost much of its popularity with the administrators. Fortunately, some of them realised its possibilities and allowed the experiments to be continued. There are, today, a number of Basic schools in Bihar and Bombay under the auspices of the Provincial Governments. Experiments along the same lines are being conducted in Bengal, C.P., Orissa and other provinces by private bodies. Among the Indian States, the Government of Kashmir Introduced the new system and is continuing it. The Basic syllabus is now being revised in the light of the experience of the last six years. It is clear, however, that such revision will only be in the matter of details and in the rearrangement of topics and Items; the main outlines and the fundamental principle will remain unchanged, for, they have already justified themselves at the bar of educational opinion and experience. That this is true is obvious from the fact that the Central Advisory Board of Education hasaccepted the soundness of the principle underlying it and embodied it in their scheme for post-war educational reconstruction which we shall now discuss. Whatever may be the fate of the scheme in the hands of the administrators, there is no doubt that the Basic idea has come to stay and that it will greatly influence the curriculum of the future in any scheme of educational reconstruction that we may take up in the years ahead.

The scheme of the Central Advisory Board of Education for post-war reconstruction is contained in the report of the Board published early in 1944. It is a grand scheme for providing India with a system of universal, compulsory and free education for all

<sup>§</sup> In fact the upper limit for the period of compulsion has been fixed at 14 become earlier than this young children are not pyrobologically mature enough to understand these notical problems. Social consoliousness does not develop in children before about 11 or 12 and to trach them concal habits and arithdes before that age comes and impossion; and anch effection, besides being psychologically understable, to often meffect in the first part of the proportion of the proposition of

children between the ages of six and fourteen. Here is the official summary of the chapter of the report dealing with primary education:

- "(a) A system of universal compulsory and free education for boys and girls between the ages of six and fourteen should be introduced as speedily as possible, though, in view of the practical difficulty of recruiting the requisite supply of trained teachers, it may not be possible to complete it in less than forty years.
- "(b) The character of the instruction to be provided should follow the general lines iald down in the reports of the Central Advisory Board's two Committees on Basic education.
- "(c) The Senior Basic school, being the finishing school for the great mojority of the future citizens, is of fundamental importance and should be generously staffed and equipped.
- "(d) All education depends on the teacher. The present status and remuneration of teachers, and specially those in Primary schools, are deplorable The standards in regard to the training, recruitment and conditions of service of teachers prescribed in the report of the Committee approved by the Central Advisory Board in 1943 represent the minimum compatible with the success of a national system; these should be adopted and enforced everywhere.
- "(e) A vast increase in the number of trained women teachers will be required.
- "(f) The total estimated annual cost of the proposals contained in the chapter when in fuil operation is Rs. 200 crores approximately."

The two Committees of the Central Advisory Board examined the scheme of Basic education thoroughly and generally approved it with certain modifications. First, the age group recommended for compulsory education was from six (instead of seven) to fourteen, thereby providing for a course extending over eight years instead of the original one of seven years. It was further suggested that this course, while preserving its essential unity, should consist of two stages - the first stoge, the funior, covering a period of five years and the second, the senior, three years. The break was to be at the age of eleven plus on grounds of psychological needs of chlidren. One group, after this break at 11, will go to the high schools which will provide a course extending over six years while the majority would continue to receive instruction in Senior Basic schools for a further period of three years till they are fourteen. Regarding the curriculum and the principle underlying it the first report stated as follows: "The Wardha Scheme of basic education is in full agreement with the recommendations made in the Wood-Abbott Report so far as the principle of learning by doing is concerned. This octivity should be of many kinds in the lower classes and later should lead to a Basic craft, the produce of which should be saleable and the proceeds applied to the upkeep of the school". About the curriculum it was, originally, laid down that English

should not be introduced as an optional subject in the Basic schools; but later the Board seem to have revised their opinion. While retterating their views that under no circumstances it should find a ploce in the curriculum of Junior schools, they have now left the option, as far as Senior Basic schools are concerned, in the hands of the Provincial Government.

The central point of the Central Advisory Board scheme is the teacher. The scheme lavs down a basic minimum national scale of pay for teachers of all grades, that for the primary grade being Rs. 30-50. For teachers in the Senior Basic schools the minimum scale recommended is Rs. 40-80. For head teachers higher salaries are provided. In the Junior Basic stage the number of teachers required is calculated on the basis of 1 teacher to every 30 pupils and in the Senior stage the calculation is on the basis of 1 teacher to-25 pupils. On this basis the total number of teachers required is calculated. The remuneration of teachers generally covers about 70% of the total expenditure and once we know the number of teachers we shall require and their scale of pay it is not difficult to calculate the total cost of establishing a national system of Basic schools. It will come to about Rs. 200. crores, Rs. 114 crores being required for Junior Basic schools and Rs. 86 crores for Senior Basic schools. The scheme further works out the details of the training and supply of the trained personnel for the national system spread over a period of 40 years, divided into several five-year stages.

Such is in outline the Central Advisory Board scheme for educational reconstruction. There have been many criticisms of the scheme, some of them being of a curious nature. Some people have criticised it because they see in it an attempt to foist the framework of the English system on this country. Today the frameworks of the educational systems in. different countries are bound to resemble each other to a large extent, for, there are certain characteristics common to oil national systems of education The important thing, therefore, is not the framework but the content. And in this matter the bonafides of the CAB scheme can hardly be questioned Others have objected to it because, by implying centralisation, it is supposed to militate against the principles of provincial autonomy. Such arguments can weigh with politicians but not with educationists. Is it more important to educate the people of the country even if, in the process of doing so, the autonomy of the provinces, in the matter of educational administration, is circumscribed temporarily and to some extent, or to continue to indirectly support Inaction and inefficiency on the plea of the sacredness of the so-called autonomy? The answer to the above would, I believe, be clear to all.

Of all these criticisms of the scheme there are and money that will be required to implement the scheme. It is being said that the scheme will cost us too much and that it will take too long. The Board anticipated these two objections and tried to answer them in the body of their report. They justly point out that the determining factor in both the cases is

the teacher. Any scheme of educational reconstruction, specially of the nature suggested here, would fail unless the right type of teachers with proper educational qualifications and necessary professional training is recruited and they are paid a decent scale of pay An impartial examination of the standards adopted by the Board regarding the recruitment, training and remuneration of teachers would reveal that they are just what we want, neither too high nor too low. No one would think that the basic minimum national scale proposed by the Board is ambitlous. Nor is the initial qualification (a matriculation certificate) demanded from those who are going to take up teaching, set very high. If we were ready only to multiply the number of existing primary schools and provide accommodation for all the six crores of children and bring them to school somehow or other without bothering about the quality of education, then perhaps people with lower qualifications and without any special training for their work might be conscripted and pressed into service on the present rate of salary. Not otherwise could we both cut down the cost and the length of the period. We have already seen how in some parts of the country, in order to accelerate the rate of progress or for some temptation, underqualified men were appointed and with what disastrous results. We do not wait to repeat that experience. So we have no other alternative than to walt till we get our trained teachers. And after all why this hurry? Forty years are not too long a period in the life of a nation

The question of our poverty is a stern reality If we are to spend Rs 200 crores, where is that money to come from. In this connection it is necessary to point out that, as the Board has shown, we shall not require all the two hundred crores at a time or here and now, and that the cost will only gradually increase. The incldence of the approximate addltional expenditure in successive five-year stages has been worked out and for the next five years we shall annum for all types of education dealt with in the Central Advisory Board report. During the next fiveyear period it will gradually rise to about 24 crores in the tenth year. Naturally the share of primary education in this expenditure will be the largest. But even then it would appear that the demand is by no means exorbitant. Rupees twenty crores per annum for the next ten years to improve the quality of primary education is certainly not an unjust demand.

Next to finance is the question of the length of the period of compulsory education. In the Basic scheme, we may remember, the age-range recommended is 7 to 14 and in the Board scheme it is 6 to 14. We may here note that increasing the age-range by a year would involve an additional expenditure of about Rs. 20 crores. There is no doubt that the earlier we can bring children to school the easier it becomes to educate them and the longer the period of their education the better our chances of securing the fundamental objectives But in our position it is obvious that we must declde upon a feasible and practicable age-range. What is the range to be? Here

the Board justly advise us against applying compulsion only upto the end of the Junior Basic stage in the first instance and then extending it gradually inwards as circumstances would suggest and finances would permit. In their opinion, if compulsion is to be introduced by stages the progression should clearly be from area to area and not from age to age. This is an eminently sound plece of advice which can only be disobeyed at the risk of making the system ineffective. On no account then we should start with a five-year range beginning at 6 and ending at 11. an age just when it is highly desirable to keep the young people in an educational environment. We have already given our reasons why we must keep the upper limit at 14. So the only course that appears to be open to us is to progress by areas. Here, however we may consider another alternative, Instead of the eight-year age-range from 6 to 14, will it be possible, at the first instance, to have a shorter age-range, calculating from 14 downwards? For example, may we start with the agerange of 8 to 14 or even 9 to 14 and then gradually extend the period downwards? There are several points in favour of this suggestion. Firstly, older children may be better and more easily motivated than younger children and because of that, in spite of the disadvantages due to age, they may take less time than younger children to cover the desired course of studies prescribed for this stage. It is quite conceiveable that the present seven-year Basic course or eight-year Board course will be covered in six or even five years if we have an older group of children to deal with. With older children it is possible to build bigger school units. So the number of schools, to start with, may be much less than it would be if we were to start with children of five or six. With young children it becomes necessary to provide almost each and every village with a school. That is not always an economic proposition. This difficulty will be obviated if we start with older children. There not require anything more than Rs. 10 crores per-are certain other advantages of fixing the age-range for compulsion like this. One such is that it will cost much less than what a full bodied scheme would. This proposal is not so novel as it may appear at first sight. We may remember that in Russia compulsory education begins at eight After all, this is going to be a temporary measure and our objective will be to extend the period of compulsion to its fullest extent at the earliest opportunity, as soon as our funds and circumstances would permit.

> We may mention here another advantage of the above proposal. It will obviate the cut at 11 plus and the consequent indirect interposition of an intermediate stage either in the shape of a senior school or junior department of a high school. The psychological reasons offered in support of this cut at 11 plus bave never been very convincing. The changes which are supposed to begin at 11 come, really speaking, a year or two later. This is now being more or less clearly recognised and educated opinion in England and elsewhere is gradually coming to question the advisability of the cut at 11 plus.

In the measure proposed there is no room for a cut at 11 plus. As a result we shall have only one type of school for all children between the ages of 8 to 14. Sociologically this is extremely desirable. It strikes at the root of the class conception of education. It will foster greater unity at the common school level. For a nation divided like ours, that will certainly be a great boon.

We are now at the end of our theoretical discussions and we can now lay down the broad outlines of the programme of work for the next fifteen years. The first five years will be for preparing the ground. In the next ten years the programme will be actually put into operation and we may have two five-year plans for that.

In the first five years our task will be:-

- to decide finally the age-range for compulsory education and to plan the details of the curriculum;
- (ii) to select a rural area in each district where compulsion is to be enforced at the first instance. (For each period of five years there will be one area.) It is important that the experimental areas should be very carefully selected:
- (iii) to set up necessary administrative machinery at the centre as well as in the selected areas to take charge of the programme and of the management of the school units;
- (iv) to make necessary financial provisions which will include maintenance grants to parents and free supply of educational materials

- and in cases of need, tiffin and medical aid to pupils;
- (v) to provide school accommodation and equipment;
- (vi) to recruit and train teachers and supervisors.
   including attendance officers and members.
   of the school medical service;
- (vii) to educate the people in the selected areas in order to enlist their active sympathy and co-operation.

I have already said that the Central Government should make themselves responsible for implementing the entire scheme. Under their direction the Provincial Departments of Public Instruction should immediately appoint ad hoc Central Boards at the Provincial headquarters. These Boards should act as advisors to the Provincial Governments in all matters dealing with primary education. Similar ad hoc bodies should also be set up in each district where the experiment is going to be made.

When all the above arrangements are complete we shall launch our first five-year programme. While it will be put into operation we shall, side by side, go on preparing the ground for the next five years so that when the first five-year plan is through we shall be ready to initiate our second five-year plan. Proceeding in this manner, perhaps in the course of the next twenty-five years we shall be able to cover a large-part of the country. The question of extending the period can only be considered when we shall have built a sound foundation and achieved some measure of success in the experimental stage which will cover the fifteen years that lie immediately ahead of us

# SECONDARY EDUCATION

W. V. BHAVE

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Prof. Blane has made a very initiest attempt at making a cirtual survey of the prevent position of secondary education in India. He has pointed out that secondary education, which at present is doubtfully 'high', and is most often the feeding ground to Caucisty education, must cease to plan this role and perform its right function its of creating useful many suled extreme in the scheme of general education. His argument that secondary education should wither end with spiritulisation nor begin a ith selection is worth reflecting on. He has also touched the problems of medium of instruction. rocational education, and public education which a planned wheme of proceeding education must take into account when it can be fittingly affect to a reformed type of primary iducation.

THE war that has just ended has brought forth new and unknown potentialities among nations and Individuals. Speaking about England, the Association of Directors and Secretaries for Education says, "No past war has made such insistent demands upon each and every individual, and the qualities which the British people have shown, while they are in part due to the great system of public education which has grown up during the past seventy years, have brought to light qualities and capabilities of a higher order and in far more generous measure than the existing educational system presumes,"\* Dr. H. G. Stead belleves, "The challenge to educationists is of a twofold nature. In the first place, it is a challenge to our society. This implies that the basic principles of this society must he examined and criticised. The principles of the society, which we must create If we are to survive and to progress beyond the challenge, must be determined In the second place, the challenge is to the educational system itself."+ No one would pretend to believe that the system of education in India is in any way similar to that of England, Still, it cannot be denied that similar educational bases will shape the educational policy in the times to come, though the emphasis would be differently distributed.

functions. It reflects; it creates. Education is not something in a vacuum. Its values are derived from the community which it serves It reflects the social movements of the times. Social movements make changes in the educational system, methods and cur-

Education is generally said to perform two . Education : A Plan for the Future, Published on behalf of the Associ-

ricula necessary. But education is also the weapon which has potentialities for good and evil. Mankind has yet to learn to ensure the use of educational capacities for good. The war has so soundly brought home to us this truth. It has been justly said that the social hopes of a post-war world will merely remain wishful thinking unless the educational system of the future is based on principles which will lead to sounder social, national and International values. The Times Literary Supplement gave vent to similar ideas when In its leading article of July 12, 1941, it said: "A purpose of education at all times is to shape the future. The more settled the social order, the more falthfully will its educational system tend to reflect its qualitles, but during periods of social change it becomes at one and the same time both undesirable and impossible for the educational system to mirror the society. In any period of grave unsettlement, and few have been graver than the present, the educationist is faced with the necessity of coming to a crucial decision." Education, therefore, is both a mirror of the times and a guide for the future.

Indian education of today is anything but national in character. The Indian Universities and High Schools are the close preserve of those who can afford to pay their high fees and other expenses. Our education in its import, far from being public, is strictly private like the public school system of England. The war has lessons of its own. Our administrators have given enough proof of late to justify a belief that they lack a sense of responsibility, integrity and a sense of service to the society from whose funds they draw their wages. The business-men and merchants have exhibited a colossal want of conscience by amassing profits

ation of Directors and Secretaries for Education, Page 4. † R. G. Stead: The Education of a Community. Page 6.

while millions of their countrymen died, and many more were half-starved in the absence of means too purchase the necessities of life at 'Black-Market' prices. Our educated 'intelligentsia' has shown a utter apathy to the needs of the people at large and has remained in its own coterie oblivious of the needs of educating its less fortunate brethren. India of the future shall educate herself to remove these anomalies of its life, these contradictions, these black holes of its comely edifice.

It is presumed that India will have control over the state in order to be able to exercise control over her economy, education and social order. It follows that education should primarily serve national needs and not merely plan or model itself on the plans or methods which have shown certain results under different conditions. Education will be for all Indians irrespective of considerations of caste, privileges, social hegemony or religious domination. This is the same thing as saying that educational opportunity shall be thrown open to every one genuinely. This necessarily presupposes some sort of equalitarian society. We cannot teach principles of justice, equity, social service and co-operation in a society dominated by greed, competition for money and selfishness. There can be no enthusiasm for educational reconstruction without the vision of a new social order. Education will have a sense of unreality without simultaneous changes in the social and economic sphere. A harmony is essential between education and the social and economic order. Education cannot be democratic in a society where the needs of a dominant aristocracy are primarily catered for. Education cannot be equitably imparted where the basic physical needs of a vast majority are not properly satisfied. Democratic education, therefore, presupposes political, social, and economic democracy and not mere capitalistic democracy of the type of the U.S.A. and the U.K. A 'just and generous' education presupposes a just and generous society.

# DEFECTS PAST AND PRESENT

Let us evaluate the implications of these principles in the sphere of secondary education.

Indian secondary education and the High Schools owe their development to the Despatch of 1854, popularly known as the Wood's Despatch. Finding that the Government had directed its attention to the highest education, it recommended the extension of "the means of acquiring general European knowledge of a less high order."† Therefore, there was a need of "Schools — whose object should be not to train highly a few youths, but to provide more opportunities than now exist for the acquisition of such an improved education as will make those who possess it more useful members of society in every condition of life."? Though it was one of the aims of the educational policy adumbrated in the Despatch, "to supply you with servants to whose probity you may with increased confidence commit offices of trust", \* it included Anglo-vernacular and Vernacular Schools in

the same class because the Despatch was unwilling to maintain the line of separation that existed then, and exists even now, between schools where the media of instruction differed. In spite of that observation. in actual practice there has always been a dual system of education in India. The vernacular middle schools and the lower sections of the High Schools were allowed to be maintained as two vertical columns of the educational ladder. High Schools necessarily became English teaching schools and rural and urban schools came to be fixed as vernacular and English schools. As the urban population had better facilities and more contact with administration. English schools became the centre of educational activities, improvements and reforms while yernacular schools faded into the background. Primary education in India never developed as 'Primary' education, It merely limped as some elementary education for a few, for many of whom it was the whole of education. It giso served as a feeding ground for the High Schools. The High Schools, far from serving a definite purpose in the educational scheme, merely tended to become 'hirelings' for the purposes of supplying the Universities with 'raw' materials. At least between the present primary and secondary systems there is little or no demarcation as stages. In the Punjab, the Central Provinces and in Bombay the High Schools begin their work after the fourth standard of the vernacular schools. In many other provinces, the High Schools, specially in the lower standards, cannot be distinguished from the Vernacular Middle Schools except in this that the High Schools teach English while the Vernacular Middle Schools do not teach English. Especially in the United Provinces and the Rajputana States, High Schools function from the third standard to the matriculation standard and they thus form a unit of pupils from about 7-8 years in age to about 15-16 years. This is unpsychological as they take no account of the change of growth and attitudes involved in the pupils at the two ends of the High School career. Those who pass the Vernacular Final examination have to lose one year if they want to join a High School afterwards. They have to learn English for one year in some 'Special Classes'. This dual system may possibly be a remnant of the vertical divisions in the educational system of England where the Public School system, the Secondary Schools and the Elementary Schools function side by side.

# WANTED: NEW BASES

The Wardha Scheme took a very bold step in the right direction when it advocated a seven years' primary course compulsorily for all children from the age of seven to the age of fourteen years. The Scheme, though it intended to aboilsh the dual system of the present times, did not take note of the mental change that overtakes children at about the age of eleven or twelve. The Report by the Central Advisory Board of Education 'On Post-War Educational Development in India' recognises "that at about the age of eleven or twelve, with the onset of adolescence, certain mental and physical changes occur in

t. Quoted by Sved Nurulish and J. P. Nask in their History of Education in India during the British period-Page 292.

<sup>·</sup> Ibid-Page. 159.

boys and girls which necessitate a corresponding adjustment both in the content of the curriculum and In the methods of instruction" (p. 9). Unfortunately, while trying to preserve the essential unity of Basic Education and in trying to transfer 'children with special abilities and aptitudes to a more prolonged course of further education', the report failed to note that it was not able to divest itself of the idea of a double system and appeared to be in favour of continuing 'classes' in the field of education. Again It seems as if the age of compulsion and the primary stage coincide with each other in the eyes of the Sargent Scheme. The Wood-Abott report on 'Vocational Education' suggested a four years' primary course to be followed by secondary education in two stages to be known as the Lower Secondary for four years and the Higher Secondary for three years It recommended a public examination after the lower and the higher secondary stage for the purposes of selection to Junior Technical and Commercial, and Senlor Technical and Commercial or University course respectively.

For planned education in India it is necessary that what is now known as the 'middle stage' should be abolished and rightly assimilated in the primary and the secondary stage

This leads us to the problem whether High Schools should be selective or cosmopolitan. Trying to solve this problem is facing the so-called dilemma of democratic education which has been so ably stated by W F. Cunningham, "If through the singleness of its system it makes provision for the development of social solidarity, it holds back the development of the superior mind. If on the other hand, through a dual system such as has been characteristic of Europe it makes provision for the development of the leaders and of the led in two separate systems, it creates a social rift between the two classes." \* How are we going to avoid perpetuating and re-creating classes, at the same time providing for the different abilities, interests and needs of our children at the secondary stage? According to the Sargent Scheme, 'the function of a High School is to cater for those children who are well above the average in ability' as the chief purpose of higher education is to form an ellte not for its own sake but for that of society. Really speaking, the term High School is a misnomer. The High School is in no sense a place of higher education. It is, therefore, wrong to select pupils at the beginning of the High School stage. Just as primary education coincides with childhood, secondary education caters for the needs of the adolescent. The High School is 'High' only in relation to the 'Primary' and "takes In all the citizens of the little world, the community. It is endeavouring to serve." Secondary education should neither end with specialization nor begin with selection. It might be incidentally mentioned that no educational system, be it the most efficient In the world, can cater for individual differences. It

is group differences that we can take into account And for this purpose, offering a variety of subjects or groups of subjects without calling different subjects 'high' or 'low' is all that should be done.

Secondary education should start at the age of twelve, after six years of Primary or Basic education to be imparted according to the Wardha Scheme. It has been recognised all the world over that education to have any lasting impression upon the educand should be up to the age of maturity. It is essential that education must be compulsory at least upto the end of the adolescence stage. In future, India wili have a great contribution to make towards international understanding and peace. Indian traditions and her vast population will give India added strength to lift her share of this international responsibility. The aim in Indian education will be the creation of an attitude of mind, which while not brooking any subservience to any alien authority, cherishes the good of the whole mankind at heart. The age of leaving the school, as a result, must be such as to put the child in a position to understand the implications of the changed circumstances. For the present, education should be compulsory between the years six and fifteen, of which six years shall be spent in a primary school and three years in a high school. As soon as feasible the age of compulsion must be raised to eighteen years. Every adolescent should compulsorily serve the nation for at least one year under the supervision of proper Social Service Units after leaving school. This one year shall place the pupil in direct touch with the community and shall bring home to him the implications of what he has learnt at school. The High School should be the only place of Post-Primary Instruction. All High Schools must be open for pupils of all communities.

# SECONDARY EDUCATION VIS- A-VIS THE UNIVERSITIES

What should be the relation of the High Schools to the Universities and other places of instruction of a higher type? How and when shall a selection of pupils for different courses be effected? Shall the pupils proceed as blindly as they do now and chance across a profession? If not, what should be our methods in a planned Indla? These are pertinent questions to ask. Let us be clear in our ideas about these and allied matters.

There has been not much clarity of thought among educators of India regarding the position of secondary education vis-a-vis the Universities. The Universities have not only regarded the High Schools as their feeding ground, but they have also felt themselves privileged so to influence secondary education as to serve their needs only. Not recognishing that the High Schools have a function of their own, people have been looking upon the High Schools as the preparing ground for the Universities. Whenever the question of the medium of instruction in the High Schools has been raised in the past, the University men have always complained of the subsequent fall in the standard of English which, they thought, told

The Pivotal Problems of Pilaration—Pages 348-349

upon the standard of the Universities. At present the complaint of the inadequacy of the standard is applicable to all stages of the educational ladder, The truth is that many who are not interested in higher academic instruction find themselves placed In Colleges and Universities for want of other suitable channels. In future the special function of the secondary schools will have to be recognised and the Universitles shall have to base their curricula upon the material obtainable at the end of the secondary stage. For this reason it is very important that the high schools be freed from the clutches of the Unlversities. Rightly has it been mentioned in the Sargent Report that High School education should on no account be considered simply as a preliminary to University education but as a stage complete in itseif, \* The Matriculation examination wherever conducted by the Universities at present should be replaced by the High School Certificate Examination.

The Universities should not be allowed to hold separate Entrance examinations. There are already too many examinations in Indin run in a 'businessiike' and uneducational way. It is intended to lessen the necessities of going through their grind. Two separate examinations at one stage would merely mean more expense and perplexity to the pupils. It should be the function of the High School Certificate examination both to test the completion of the High School course as also the suitability for the different branches of higher studies. Beyond selecting pupils for entry into the High Schools, the Report by the Central Advisory Board of Education does not give any Indication of how it seeks to select pupils for the different groups of subjects in the latter half of the High School stage or for entry Into places of higher instruction. The High School should have a double programme: 1. The instructional programme; 2. The guidance programme. For the first three years that is, upto the age of compulsion, i.e. 15 years of age-all the pupils will undergo the same type of instruction. At about fifteen years the guidance programme will begin to function according to the aptitudes and abilities of groups of pupils. The guidance programme will consist of measuring general Intelligence and special aptitudes, of testing the scholastic records to find traits of total personality and of counseiling on educational and vocational matters. It will be the work of this side of the school to classify and select pupils for the various courses obtainable at the latter half of the secondary stage. Without a proper guldance programme, it will be futlie to talk of selection and of diverting to different useful channels a great many of the adolescents who at present crowd the Arts and Science courses of our Arts and Science Colleges.

# THE PROBLEM OF VOCATIONAL EDUCATION

We shall do well to consider the advisability or otherwise of 'vocational' education at the secondary stage. The two usual objections against the present secondary education are that it is too bookish, hence unreal, as it does not give any vocational education

so as to make the pupils able to stand on their own legs after the secondary stage, and that it does not educate the total personality of our children, body, mind and spirit. Flexibility in the use of hands for manual work is not achieved. Of late, some attempts are being made to remedy these two defects. But the attempts are haphazard and do not show an insight into the special problems of India, just as they show no real appreciation of the meaning of vocational education. Much has been said and written about the Spens Report which emphasised the value of 'Technical High Schools' in England. The Wood-Abbott Report on vocational education recommended for India Junior and Senior Technical Schools. Mr. Sargent in his report also suggests that High Schools should be of two types-Academic and Technicaleven though the latter name is not very 'inspiring'.

In this connexion it must be remembered that, though in England the age of compulsion is 14 years. yet in many cases the children leave schools at 12 years and join industries as workers, attending night schools or continuation courses for a further period of two years. Needless to say, at this unripe age they prove inefficient workers, hence the need of such Technical Schools Even in England now it is believed that the statutory age of compulsion should be raised to 16 years with no exemptions and that no premature decisions about a child's future be taken. "In effect, our view is that all normal children who are expected to leave school at the statutory leaving age should follow, upto that age, a broadly nonvocational course, and that the learning of any specific trade should be postponed until, by these means, a satisfactory groundwork of general education has been laid." India is an agricultural country. In spite of the necessary industrialisation in the times to come, it must essentially remain an agricultural country. Industry would only add to our happiness. It would not change the character of the country. Our education at the secondary stage would not be shaped by the needs of industry which are often of a specialized type, though the High Schools would certainly aim at removing any bias against manual occupations and this aim will hold good for pupils with 'academic' interest as also for those who are otherwise.

Human learning is the outcome of three mental functions: cognition (knowing), affection (feeling), and conation (doing). In terms of the principles of learning, we get from these functions the principles of apperception, motivation and self-activity. These three result respectively in: knowledge of facts and meanings, attitudes, and abilities for skills. Our understanding, enjoyment and control of life depend on these factors. Education to be complete should take into account all these factors. Any scheme which leaves out one while maintaining the other factors would leave a gap in the child's learning. Any scheme, again, which mentions special schools for these special faculties would be training only one faculty. At the secondary stage the curriculum should be so framed as to take into account the need of complete education and not

Report of the C. A. B. of Education: Post-war Educational Department in India, Page 21.

speak in terms of vocational or academic education. That is, there should be no education which revolves round the pivot of any one of these. For this very reason the use of such terms as 'Vocational blas' 'Agricultural blas', 'Academic' or 'Technical' is to be avoided in connexion with the secondary stage. The High School should have a wide variety of curriculum for children, while maintaining an essential oneness of standard and unity of values.

The variety of courses available at the last three years' stage of the High Schools should be as recommended by the Government of Bombay's report on Vocational Training in Primary and Secondary Schools and consequent reorganisation:



This classification is based on the optional subjects that are to be taught to groups of pupils according to their abilities. The compulsory subjects shail be the same for all the pupils. It may not be possible to have all the groups in one single school. But attempts must be made to have as many as possible together. In no case should there be an idea that any one group is superior or inferior to the other group. Physical Training and Games should be compulsory for all children They must be conducted on right lines and not in the half-hearted fashion in which they are conducted at present. The standard to be achieved by the end of the High School stage would be that which is covered at present by the Intermediate of the Universities. It is expected that the primary schools in about six years would be covering the course at least upto the present 'Vernacular Final' stage. The Wardha Scheme proposed to complete during seven years the course upto the present Matriculation minus English. But even after the scheme was accepted on principle by so many people, very little experimental data was available to prove that expectation Hence, the minimum assumed here is the vernacular final course of today.

# THE MEDIUM OF INSTRUCTION

The medium of instruction should invariably be the mother-tongue of pupils. It is quite possible to teach even the highest university classes through the different Indian languages In some languages much preliminary work, preparation of text-books, and establishing a terminology for the different technical words occuring in sciences of all sorts, has already been undertaken. The mother-tongue is not merely one of the subjects of instruction, it is also the means of instruction in other subjects. Hence, on it depends the total result of education. One reason of the ineffectiveness of our present education is the artificiality and unreality arising out of a medium which is foreign to our soil and which cannot, as a result, conduce to better education. It is evident that the medium at any particular place

will be the language which is spoken at that particular place But there might be places where a considerable number of pupils of a different language unit may necessitate the making of educational provision through the medium of that particular language. If a sufficient number of pupils is not forthcoming, merely for sheer convenience those pupils will have to learn through the medium of the language current in the part of the country, or the group shall have the option of running its own school. Such arrangements might be necessary on borderline places like Belgaum, Eastern Bihar or Burhanpur where two language units require different media, or places like Jhansi, Gwalior or Jubbulpore where people of a different language unit have settled ln large numbers, or at places like Calcutta, Bombay and Deihl where different languages of India are largely represented for obvious reasons. When the principle of Instruction through the mother-tongue is accepted, it goes without saying that the Anglo-Indian and the European community has a right to learn through its own language, English. But no 'special' provision in the shape of extra grants or facilities can in future be made for them They must move with the country without remaining aloof. As English is a foreign tongue not known to many people, the English speaking people in India must of compulsion learn an Indian language to be better associated with the masses. That will remove a sense of 'no-confidence' which the people at present have about these communities All examinations of the 'Senior Cambridge' type, conducted by agencies outside India, must be stopped.

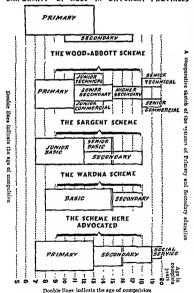
As long as English is the language of administration, it will not be prudent to remove English from the list of compulsory subjects at the High School. The aim in teaching English should be 'essentially practical'. Work-a-day English should be the objective in the immediate future. This would mean more oral practice and less of waste in learning the rules of grammar, writing compositions on impossible subjects and the annoying necessity of reading poems from Wordsworth or Kingsley or Scott. In a setting foreign to our experience. An oral test in English should form a part of the examination at the end of the High School. As the pupils will learn English at twelve years of age and not at eight or ten as they do today, the grounding in the mothertongue would prepare them better for learning English and they will have to spend less time on it. An attempt should also be made all over India to encourage pupils to learn one more Indian language. That is a peculiar need of India. Our misfortune is that we know an Englishman more than we know our own brethren in the other provinces of our country. Pushtu or Hindi in the Punjab, Gujrati or Kannad ln Maharashtra, Assami or Hindi in Bengai may weli be the other Indian languages to be learnt.

# SOCIAL, ADMINISTRATIVE AND FINANCIAL RE-ADJUSTMENTS

It is possible to control the nation's economy provided there is the necessary authority. It is difficult

to change the social structure with equal ease. There has been a good deal of misapprehension and misconception about women's education in India. Education will be the chief means of uprooting the existing prejudices. We cannot in the same breath speak of the necessity of women teachers, especially in the lower grades of very young children, and of the home as the women's sphere of activity. Psychology has proved beyond doubt that women are men's equal in intelligence. "Mental individuality among girls is similar in range and scope to that existing among boys. The sexes distribute so nearly alike in tests that no need is found for separate forms." . Women can no longer be treated as domestic 'Untouchables' sharing only the menial duties at home and responding to the physiological functions of bearing children. There will, hence, be no difference between the education of boys and girls. In order that the present disparity of education among boys and girls be removed it is necessary in the initial years of the postwar period to work with greater emphasis on women's education. Women should be enabled to be men's nariners and co-workers in the real sense.

# NO SYSTEM OR THE PRESENT SYSTEM. THERE IS NO UNIFORMITY OF AGES IN DIFFERENT PROVINCES



1 Leta S. Hollingworth: The Psychology of the Adolescent, page 101

There will have to be more co-operation between the Training Colleges, the Inspecting agency, and the framers of the details of the curriculum, in order to determine the method to make the curriculum really effective. A good deal of vigilance will be necessary to extricate education from its present chaotic conditions. The Central Government should be authorised to frame broad principles leaving the provincial governments free to determine the details according to the changing environment. As far as possible the personnel for the administration will not be selected directly as is done at present. The Officers of Education should have served in the initial grades and obtained experience which should enable them to judge and to handle day-to-day problems better. Direct recrults do not generally have an attitude of service; they carry unpractical airs of superiority and lack the necessary co-operative frame of mind.

The expenditure should be divided between the provinces and the Centre on a half and half basis. Mr. Sargent has positively done a valuable service to India by providing us with very valuable statistics. The scales of salaries as suggested by him are the barest minimum. It must be remembered that the salaries of teachers should not be fixed as absolute values. In order to improve the efficiency of education, it is necessary that teachers should get wages in parity with other public servants. The principle must be that the "emoluments of teachers in primary and secondary schools should be in accordance with the standard scales of pay that may be laid down for other public servants of similar attainments and responsibilities", 1 Principal Agarwai maintains that the secondary schools will be able to meet about two-thirds of their expenses from the income of their productive work and the state will have to spend nearly Rs. 20 crores per annum as the one-third of the total expenditure to be calculated at Rs. 55 per student.2 The productive capacity of the schools on a large scale has neither been experimented upon nor proved beyond doubt. It is therefore difficult to accept Mr. Agarwal's calculation Mr. Sargent's are the only reliable figures that are available. According to him Rs. 86.50 crores will be required for middle schools for the age range 11-14. If we make deductions for the first year, 11-12, which is intended to be assimilated with the primary stage, the expenditure on 12-14 range would be about Rs. 50 crores per annum. This sum and the 50 crores to be spent on the High Schools, according to Mr. Sargent, would cover the expenditure of the Secondary stage as adumbrated here. Within this sum it is possible to include a programme of 'Guidance', if it is accepted that no High School shall have more than 750 pupils, no Head-teacher shall get more than Rs. 350 P.M. and that all teachers either 'Academic' or 'Technical' should get the same rates of pay.

The immediate programme should be not of buildings but of schools within the existing buildings

Report on Vocational Training in Primary and Secondary Schools and Consequent Reorganisation. (Govt of Bombay). Page 43.
 S. N. Agarwal The Gaudinau plan Page 103.

# 15 Years Ahead

The number of schools and consequently of pupils can at least be doubled by utilizing the present buildings throughout the day. Though it is true that forty years as suggested by the Sargent scheme are too long a period and that we cannot withhold educational expansion till then, it is perhans truer that

no start can be made abruptly. At present the expenditure on High Schools in British India is about nine to ten crores per annum. If we begin spending double that sum annually, a real start will have been made by 1950, which will facilitate universal expansion of Secondary education throughout India.

# UNIVERSITY EDUCATION

# N. K. SIDHANT

N. K. Suthant, M.A. is Professor of English and Denn of the Faculty of Arts, Lucknow University. He was some time Secretary, Later University Board.

After an analysis of the historical background of University Education in India, Prof. N. K. Sidhant sets the present deplorable position of our University Education in relation to that in the adjuncted countries of the vools (Insighings the vortions Universities is India and discussing the criticism territor) of the vools (Insighings the virious Universities is India and discussing the criticism territor) on the round, he vaggets inciding and pointedly how the right kind of student and the right hand of torther can be ground, how shally will instruction can be properly current out, so that University cheatman may be rendered really mobe and faitful.

N our study of University education it will not serve any useful purpose to turn back to the distant past and to examine the work of the centres of higher education in the Brahminical, the Buddhist and the Mohammedan periods. None can deny that those centres were vigorous and active, that they used to attract students from all over the country and even from outside, that they produced men who were pioneers in many fields of thought. But they were in harmony with the structure of society as it then existed and they supplied the intellectual needs of the community as they were then experienced. Conditions today are vastly different.

### HISTORICAL SURVEY

For our purposes we go back to the closing years of the eighteenth century. In 1792 the East India Company's Court of Directors discussed a proposal for the spread of education in India and one of the Directors is reported to have said: "We have just lost America from our folly, in having allowed the establishment of schools and colleges and it will not do for us, to repeat the same act of folly in regard to India". In 1797, however, Charles Grant emphasised the necessity of imparting to Indians the knowledge of the English language, "With our language, much of our useful literature might, and would, in time be communicated The Hindus would see the great use we make of reason on all subjects and in all affairs; they also would learn to reason, they would become acquainted with the history of their own species, the past and present state of the world". In 1813 an Act of the East India Company lays down that "a sum of not less than one lac of rupees in each year shall be set apart and applied to the revival and improvement of literature and the encouragement of the learned natives of India, and for the introduction and

promotion of a knowledge of the sciences" among them.

In 1811 Lord Minto complained of the decay of science and literature in India and we soon find enlightened Indians expressing their ideas in the same strain protesting against the effete traditionalism of the old learning Thus in 1823 Ram Mohan Roy expressed disappointment at the establishment of a new Sanskrit school in Calcutta "under Hindu Pundits to impart such knowledge as is already current in Indla. to load the minds of youth with grammatical niceties and metaphysical distinctions of little or no practicable use to the possessors or to society". He thought that the object of the Government should be to promote "a more liberal system of instruction. embracing mathematics, natural philosophy, chemistry and anatomy, with other useful sciences". This desire had already led to the foundation in 1817 of the Hindu College in Calcutta which may be described as the first institution in India for the imparting of western knowledge through the medium of English. This was followed the next year by the establishment of a college at Serampore by three Christian Missionaries "for the instruction of Aslatic Christian and other youth in Eastern literature and European science." This institution was incorporated in 1827 by a Royal Charter granted by His Danish Majesty to whom Serampore belonged and may therefore claim to be the first western universlty in India. Missionary effort also led to the establishment in 1820 of the Bishop's College and in 1830 of the General Assembly's Institution in Calcutta, while lay enterprise was responsible for the Calcutta Medical College founded in 1835 with the object of teaching European Medicai Science.

In the meantime a violent controversy raged between the oriental and western schools of thought and the Minute of Macaulay in 1835 was the decisive factor in the victory of the latter. The two important principles enunciated in this were: (1) complete neutrality in matters of religion was to be maintained by Government; and (2) all funds available for education were to be devoted mainly to the support of schools and colleges in which western learning was imparted through the medium of English. A few weeks later the Governor-General. Lord William Bentinck, issued the resolution "that the great object of the British Government ought to be the promotion of European literature and science among the natives of India; and that all the funds appropriated for the purpose of education would be best employed in English Education alone." In Bombay the controversy, became one between the Anglicists and the Champions of the mother-tongue as the medium of Instruction, to be settled as elsewhere by the policy of the Government of India.

Among other steps taken by the Government may be mentioned the official recognition of the freedom of the press in 1835 and the supersession in 1837 of Persian by English as the language of the courts This latter change affected the Musilms adversely as they were reluctant to allow their children to substitute the study of English for that of Persian and Arabic Another effect of the change was that in 1844 Lord Hardinge feit himself justified in issuing a Resolution enjoining that "In every possible case preference shall be given, in the selection of candidates for public employment, to those who have been educated in the institutions imparting western knowledge" This was followed ten years later by the Despatch of the Court of Directors enunciating-(1) the aim of education, "the diffusion of the improved arts, science, philosophy and literature of Europe": (2) the place of English and the Indian languages in education and as media of instruction; (3) the creation of a separate department for the administration of education in each province: (4) the establishment of Universities at Calcutta and Bombay (and even at Madras or in any other part of India where a sufficient number of institutions existed from which properly qualified candidates for degrees could be supplied); (5) the goal of mass education and encouragement of Indigenous schools for the purpose; (6) the adoption of the Grant-in-aid system. (7) the establishment of training schools for teachers in each Presidency; (8) the encouragement of professional education, the supply of the needs of the Mohammedan community; and (9) the omission of religious education from the school curriculum.

This led to the foundation of Universities at Calcuita, Bombay and Madras in 1857 on the model of the University of London as will be explained later. Colleges had been established before this at Calcuita, Bombay, Madras, Agra and other places, but the word "college" had so far been used loosely and henceforward they had to confline their work among students who had passed the Entrance Examination of the Universities of which they formed a part,

Twenty-five years later, Lord Ripon appointed an Indian Education Commission which was directed "to enquire particularly into the manner in which effect had been given to the principles of the Desnatch of 1854" and to suggest measures for further extension of the policy laid down in It. The main recommendations of this Committee related to the gradual withdrawal of the Government from the direct management of schools and colleges and the development of the system of grants-in-aid. There was a controversy about the educational work of missionary institutions and the Commission recommended "that the system of grants-in-aid be based as hitherto on an entire abstinence from Interference with the religious instruction conveyed in the institution assisted" and gave the parents liberty to withdraw their children from such instruction. Its recommendations regarding collegiate education went mainly into matters of detail but one fundamental Issue was raised about bifurcation of studies in the High Schools. (On this point Sir Alfred Croft was asked to prepare a réport after consideration of which the Government of India suggested the Introduction of drawing and rudimentary sciences in the High Schools and the encouragement of the faculty of observing and of reasoning from observation.)

While these Government reports were being prepared two new Universities were founded, one in the Punjab in 1882 and the other at Allahabad in 1887. As Universities grew in number and importance, the problem of University reform assumed importance for thoughtful people and the Government was led to appoint a commission in 1902 "to enquire Into the condition and prospects of the Universities established in British India" and to suggest measures for raising the standards of University teaching. The report of the Commission is disappointing as it did not propose any radical change of University organization on a fundamental reconstruction of the University system. It is true that it recommended the assumption of some teaching functions by the University, stricter supervision of the colleges and closer attention to the conditions under which the students lived. These recommendations were accepted in the Universities Act of 1904, but, as Mr. Gokhale pointed out, this was nothing new. Similar provisions had existed, for example, in the Aliahabad University Act, but could not be availed of for lack of funds which would not be forthcoming through the passing of a new Act. The Act gave more powers to the Government in the administration of Universities but did nothing for the encouragement of original research and higher teaching, for the improvement of the quality of teachers and of the nature of examinations.

In spite of the restrictions imposed on recognition of colleges by the Act of 1904 their number went on increasing and more students had to be accommodated in each College. The average numerical strength of a College rose from 123 in 1901 to 283 in 1921 and this increase in fee-income enabled managers to think of improving their institutions. Universities began to receive substantial endow-

ments, the most noteworthy early instances being those made by Pailt and Ghosh to the Calcutta University and an annual grant of 5 lakhs was sanctioned by the India Government for the improvement of Universities. But more far-reaching changes had been contemplated in the Government Resolution of 1913 on Educational Policy which took stock of the existing University situation, of five affiliating Universities in charge of 185 Arts and professional colleges and contemplated restriction of the area over which these Universities had control "by securing in the first instance a separate University for each of the leading provinces in India" and in the second by creating "new teaching and residential Universities". It declared: "the Government of India have decided to found a teaching and residential University at Dacca and they are prepared to sanction under certain conditions the establishment of similar Universities at Aligarh and Benares and elsewhere as occasion may demand. They also contemplate the establishment of Universities at Rangoon, Patna, and Nagpur". This was followed by the appointment of the Calcutta University Commission in 1917 which recommended the establishment of a unitary teaching University at Dacca, the pooling of the teaching resources of Calcutta City to work a teaching University, the separation of Secondary and University education at the Intermediate stage, emphasis on technology in Universities and the extension of opportunities for professional and vocational training.

No new Universities had been established between 1887 and 1916, but now they came in at a fairly rapid pace. The Benares Hindu University and the Mysore University were founded in 1916 and they were foliowed by Patna in 1917, Osmania (1918), Aligari Muslim and Lucknow (1920), Dacca (1921), Delhi (1922), Nagpur (1923), Andhra (1926), Agra (1924), Armamalai (1929), Travancore (1937) and Utkal (1913), making a total today of 16 Universities in British India and 3 in the Indian States.

### CLASSIFICATION

When the Council of Education first mooted a proposal for the establishment of the Calcutta University, it found the model of the University of London rather than of Oxford or Cambridge better adapted to the needs of the community and Wood's despatch endorsed this opinion. The first three Universities were thus of the affiliating type and this model was adopted for the two which followed in the eighties of the last century. To say that these five Universities followed the type of the London University may be misleading to those of us who are familiar with the present constitution of the latter. To-day the University of London has a two-fold entity with an Internal side made up of thirty-six institutions and an External one to cater to the needs of students from all over the country (and, in some cases, even from centres as far away as Colombo). It started with two constituent colleges the pupils of which were to be admitted to its examinations, classed according to their respective merits and admitted to its Degrees if these pupils were found fit for them. Its

Charters, however, contained a provision about admitting to the examination candidates from other approved institutions and a liberal exercise of this privilege led to the granting of a fresh Charter under which the University accepted no responsibility beyond the examination of its candidates. Now its recognised institutions which send up candidates for the Internal examination form the core of the University: their senior teachers, - professors and readers, as they are designated,-are appointed by the University and they are allocated funds for the payment of these teachers. Of the junior teachers some are recognized by the University while others have no direct concern with the latter. In the first five affiliating Universities of India there was nothing corresponding to the External side of London University and they did not accept all the responsibilities that London does for its so-called "Schools". No coilege teacher was appointed or paid by the University: its supervision of Collegiate work involved recognition of all teachers and approval of the instruction imparted by them as fit for University standards,

Of the nineteen Indian Universities nine (Calcutta, Madras, Bombay, the Punjab, Patna, Nagpur, Agra and Utkai) are affiliating ones and eight (Benares, Aligarh, Lucknow, Dacca, Aliahabad, Mysore, Hyderabad and Annamaiai) are unitary; Travancore is meant to be of the latter type but retains some of the old colleges. While Deihi is still in the process of making, with some features of the federal London University but gradually conforming to the unitary scheme. Of the affiliating Universities only three (Patna, Agra and Utkal) are purely examining bodies: their existence is confined to central offices, to administrative officers like the Vice-Chancellor and the Registrar and to Committees and Councils like the Senate, the Syndicate, the Faculties and Boards of Studies. . The other six carry on some teaching work either in selected subtects or at certain stages. Thus in the Calcutta University all teaching at the M.A. or MSc. stage is conducted by the University with a staff appointed and paid by it Bombay maintains two University Departments, one in Economics and Sociology and the other in Chemical Technology, while Madras has whole-time teachers in a number of subjects like Indian History, Economics, Botany, Bio-Chemistry, and Zoology. Similar remarks hold good of the Punjab and Andhra Universities, the teaching work of the latter being more important than its work as an affiliating and examining body while the reverse is true of the Punjab.

The unitary Universities again do not conform to a uniform standard: three of them, Dacca, Lucknow and Allahabad, have their students for two years before their first Degree while the others have them for four years. Some of them are mainly residential while others have a very small percentage of the total enrolment living in Hostels or Halls. Some have

<sup>\*</sup>Naspur has so far here of this type but with the utilising of the maginificant hequest of D. Luxminarayan it should have a strong Department of Applied Science.

their Tutoriai and Seminar work well organized: others depend mostly on formal lectures as in most of the colleges of the affillating Universities. They have been described as modelied on Oxford and Cambridge but it will be more correct to say that they conform to the Edinburgh or Manchester type. What they have in common with the English provincial Universities are: (1) the unitary character; (2) the democratic constitution; (3) local or parochial nature. Oxford and Cambridge have something of the federal character through their colleges which are not only independent units of residence but also units of teaching. In the Indian teaching Universitles all instruction is centralised and though some of them attempt to arrange for some tutorial instruction in the Hostels or Halls this has never been well organized and no effort has been made to give formal lectures at these places.

Finally, "the Provincial Universities sprang from the soil; they obtain part of their support by heeding local needs." In India, three of the teaching Universities are in Indian States and Intended almost solely to cater to the needs of their respective areas. Annamalal makes a special point of the study of Tamil literature and culture, Andhra of Telugu, Lucknow of the needs of Oudh, Dacca of Eastern Bengal Two of the Universities may be described as sectarian or meant for a distinct community rather than for local areas and in this respect loss their nation-wide character and confine their interest to a limited district

### PROBLEMS

Criticisms of the work of Indian Universities have been mainly directed as follows:— (1) over-crowding and abnormal numbers leading to wastage; (2) unemployment among graduates due to their defective training; and (3) lack of original work or of a real contribution to knowledge.

It is pointed out that at the first Matriculation examinations of the Universities only 219 candidates were successful, while in 1881-82, 7429 appeared for the same examination and 2778 passed. But there has been an even more strlking increase in recent years, the number of successful matriculates in 1936-37 being 74.901. Similarly the number of B A.'s and B.Sc's in 1940-41 was 11,185 as against a hundred or so in the early years. The Calcutta University complained in 1917 that while the increase in numbers had everywhere been striking it had been much greater in Bengai than in any other part of India. "The flood of candidates for University training has put so heavy a strain upon the University and its colleges as to lead aimost to a breakdown.' Since 1917 the numbers in other parts of India have gone up more rapidiy and a new University Commission will not need to particularise the Calcutta University for increase in enrolment.

Yet if we calculate the number of University students in relation to the total population, we shall find India to be more backward than not only the

nd India to be more backward than not only

\*These numbers are for Hunersities in Beitish India.

principal nations but also the colonles of the British Empire. Before the war the proportion of University students to the entire population was 1 to 300 in Russia, 1 to 517 in France, 1 to 690 ln Germany, 1 to 885 in Great Britain, 1 to 650 in Australia while in India lt is 1 to 2206. Similarly South Africa has 5 Universities for its white population of two millions, Canada has 20 Universities for eleven millions, and Australia has 6 for seven millions, while Indla has 19 for its 380 millions. It cannot thus be contended that India has too many Universities or too many students at these institutions If one points out (as the Calcutta University Commission did) that the number is too large in proportion to the population that can read and write, criticism should be directed against the meagre numbers of the latter and attempts should be made to remedy this shortcoming.

When, however, we note that the Increase of muthers in Universities has been followed by a considerable wastage, when we find that in 1940-41, 20,502 candidates appeared at the B.A and B.Sc examinations of British Indian Universities and only 11,165 passed, we have to think of it as one of the major problems of Indian Universities. The recently published report of the Central Advisory Board says: "Probably nowhere among the Universities of the world is there so large a proportion of failures in examinations as in Indian Universities. Apart from the waste of time and money on the part of all concerned, the social effect of so much disappointment cannot be other than deplorable".

Responsible authorities have sought to substantiate the charge of overcrowding by pointing to the large percentage of Indian University graduates who, in pre-war days, got no sultable employment. If this unemployment can be explained by the industrially backward condition of the country, by the lack of avenues of employment, a similar answer cannot be given to the charge that many of these graduates are unemployable on account of the poor quality of the education imparted in the Universities. The essentials of a true University education are: "efficient Instruction; opportunities for deepening and broadening general culture; and full responsible membership of the University society". What the Indian Universities understand by efficient instruction is careful coaching of students in facts and ideas which they may reproduce in the public examinations. The teacher does not encourage his students to think for themselves or to develop a critical faculty. The lectures are not up to the standard of western Universities partly because many of the students are immature or Ill-equipped, partly because the teachers themselves are not of high intellectual calibre. There are few opportunities for advancing general culture or for responsible membership of the University society as, even in some of the so-called residential Universities, only a small percentage of the pupils lives in College Halls: the majority comes from homes in the city which have no intellectual atmosphere Even for those who are "in residence" the Universities do not provide the facilities for corporate life and the training in character one associates with the ancient Universities

Finally, the poverty of intellect in the Universities is evident from the nature and amount of their research-work, the sum-total of their contribution to knowledge during these seventy-five years. The Indian Universities became conscious of their duty towards research only after the development of the teaching side of the Calcutta University and the establishment of the new unitary Universities which iessened the burden of teaching for the professors so that they might have time for original work. During the jast thirty years University teachers have been responsible for numerous publications but few have risen to the heights of the best work of western Universities. It is true we can speak with pride of the work of Raman and Saha in Physics or of Radhakrishnan and Das Gupta in Philosophy but for 19 Universities with over a lakh of students the output is meagre in quantity and unimpressive in quality. Even now we hear University authorities debating the necessity of leisure for research-work: teaching is said to be the professor's primary duty, research a luxury for his personal reputation. We have still to convince many University administrators that "the necessity of presenting to his students his subject in its entirety requires that the professor's scholarship should be broad in scope; the necessity of conducting a seminar for advanced students requires that he should be active in production."

### THE FUTURE

In planning for future educational development in India, our starting point is the report issued last year by the Central Advisory Board. If one student in four or five is to be provided secondary education after a period of compulsory basic education, High Schools will have to be provided for about 7,200,000 pupils and the number of Graduate teachers required will be in the neighbourhood of two lakhs. If this scheme is to be fully worked after even thirty years the number of students at the Universities will have to be substantially increased. That they will be so naturally without reference to this need is unquestionable. At present, if we count the Intermediate classes as part of the University, one out of three pupils icaving the High School goes to the University and even if we exclude these, the University has to provide for one in five. This percentage is much too high and is responsible to a great extent for the iowering of standards in the University through the admission of many ill-equipped students. The drift to the Universities is mainly due to economic reasons, to the lack of professions to which pupils may be diverted after completing their secondary education. If, as we hope, India is more industrialised in the post-war era, this drift should disappear and it will be possible for the Universities to insist on higher standards for their admission examinations. The proportion of High School students proceeding to the University will then be about one in fifteen and even then the Universities will have to admit more tinan double their present numbers.

But the mere increase in numbers will not improve University education: on the contrary, it will increase the difficulties of University administrators. They have to make sure, first, that only those students come to the Universities who are likely to benefit from them, and secondly, that the teachers are intellectually the cream of the nation, the people best fitted to train the youth of the land. The first condition can be ensured if the nature of the admission tests is radically changed: they must cease to be tests of pure memory-work, though memory must always play an important part for success in examinations. At present we cannot think of the substitution of written examinations by any other standard tests though some people put a premium on the intelligence quotients which can be discovered by psychologists, This, however, is still a matter for controversy and though we consider a reform of the examination system imperative, though we feel that University entrance examinations should aim at discovering promise rather than attainment, we know that we cannot yet do this by a mere reference to school records. Even for England with its better organised secondary schools, with its better qualified staffs, the Norwood Committee . do not advocate it as immediately practicable: Ideally the teachers are the best fitted to know their pupils' work and to form a judgment on it, but this is an objective towards which progress has to be gradually made. If this holds good of England, in this country the substitution of the external examination by the teachers' judgment will be a much slower process but we hope that this will be ultimately possible and in the meantime the entrance examination should become "what is known as a 'subject examination'. that is to say, an examination in which pupils would take whatever subjects they wished without restriction as to minimum number of subjects or groups of subjects; that a certificate recording the performance of the pupil in each subject expressed in grades, as, for example, exceilent, good, satisfactory, weak, should be granted to each pupil." This will remove some of the present entrance examinations and will help the Universities to discover those who are best fitted to assimilate University instruction.

But the choice of the student is only part of the task: we have at the same time to discover the real University teachers whose jectures will stimulate the minds of the pupils as they are not content merely to nurvey information or summarize printed works, who will develop a critical faculty and a power to weigh evidence objectively and who will promote an attitude rising above personal interest. It is natural for fresh men at Universities to expect the "spoon-feeding" customary in schools, to have a pathetic confidence in the printed word and to look up to their teachers for dogmatic judgments on essential themes. University teachers in India have been mostly content to do this for the benefit of students who are compelled by regulations to attend lectures in which they may find no interest.

The Committee of the Secondary School Examinations Council appointed by the President of the Board of Princetion in 1941.

In order to be able to stimulate students the teacher must fulfil the double function of conserving and advancing knowledge and there is no antithesis between the teacher and the researcher as is sometimes thought. As Principal Scott of Manchester put it: "He who learns from one occupied in learning, drinks of a running stream. He who learns from one who has learned all he is to teach, drinks the green mantle of the stagnant pool."

When some University authorities contend that the researcher is seldom an inspiring teacher, they think of the pseudo-research which has had vogue in Indian Universities, research made to order to dignify a mediocre intellect with a doctorate. We are familiar with advanced students who have plodded along to their M.A. and having failed to get through any service examination take to research as a last resort. They work for three years on "Letter-writing in the seventeenth century" or "Administration of local board dispensaries in Dravidistan" and emerge as Doctors of Philosophy to have prior claim on the next teaching post in the University. Once settled in their post they forget the necessity of learning or of contributing to knowledge: they are content to do the routine-work of summarizing text-books to a drowsy class which attends the lectures because the University makes it obligatory to do so.

What our University men have to emphasise is the point that the conscientious and inspiring teacher must be an investigator: he may or may not have done original work before his appointment. but once he is on the staff, a good deal of his spare time has to be devoted to research which is not a mere collection of facts or a jotting of observations in the laboratory. The University must leave them the time and the tranquil atmosphere necessary for such work and insist on a periodic report of the progress in his investigations. A democratic constitution is not always conducive to real work: each senior teacher has to work on a number of Committees and the Head of a Department has to do administrative work which takes up a good deal of time. Moreover, the laymen in the University Council always complain of the light work done by teachers and desire that a minimum of 18 or 20 hours a week should be insisted on. The teacher contends that his time is

wholly taken up with these lectures, preparation for them and correction of written work. All this has got to be changed; the work of the University man has to be judged by criteria different from those applicable to industrial factories and it is to be hoped that the state will understand the real function of the Universities in the future.

Some eminent educationists hold that the main obstacle in the way of University Work is the use of the foreign medium of instruction. While a good deal can be said in favour of the use of the mothertongue in Universites, one has to recognise the practical difficulties in the way. Lack of requisite literature in the Indian languages, bilingual or trilingual areas served by one University, University professors who have to address students drawn from ail parts of India, these are some of the impediments in the way of the adoption of a modern Indian language as the medium of instruction.\* One may also doubt if one should make too much of this point as the question of the medium at the Universlty stage is not so vital as it is at the lower stages of education. The command over the English language which the student is expected to have at the end of his secondary education should enable him to appreciate and assimilate all lectures in English provided those lectures are carefully prepared, provided the knowledge which has been fully assimilated and systematised by the teacher is conveyed in simple language.

Finally,† we hope that in future the Indian Universities will be bound by closer intellectual links than they have been so far and that there will be a free flow of ideas from one University to another. Such an interchange of ideas will help the Universities to rise to their proper heights, it will stimulate their efforts in the search for truth, it will help them to be the vitalising force for the youth of the land in a new and re-born India.

The example of the Osmania University is not to the point, for Urdu is not the mother-tongue of the majority of the people but the Statelanguage, as English is in British India.

<sup>†</sup>It is not possible in this survey to go into details like the duration of Degree courses, the number of public examinations or the quality of seminar work.

# TEACHERS' EDUCATION

# K. L. SHRIMALI

K. L. Shrimut, M.A., (Philosophy) Benares, M.A., (Experimental Psychology), Calcutta, B.T. is Principal, Vidya Bhovan, G. S. Teochers' Training College, Udaspur, Editor. Indian Journal of Psychology, Author of Hackon-ki kuch Sanaryogen.

In the article here, Principal Shrimath has most significantly het at the crux of on-main educational problem, viz. the education of the teacher with the purpose of developing essential personal qualities like sympathy, toleration, sociality under adopticality which the profession so acutely demands. He has also emphasized the importance of maintaining the intellectual and material status of the teacher at it is on him that all educational effort and achievement turn. The right means of bringing him up to the mark all-round are interestingly made clear.

HAVE deliberately chosen as the title of my article the EDUCATION and not the TRAINING Of Teachers as the latter term is lnadequate and misleading. The 1st in the 1s

The real object of training is not to train in teacher but to educate the human being, to selop those personal qualities, such as sympathy, in young people, toleration, adaptability and the builty easily to make human contacts, which will ally help him in his work. It has been rightly ointed out that "the tricks in this profession are in tricks of the tradesman and not of the trade." "we can train the right type of human being, he or a will easily acquire the technical skill required in the profession. The personal education of the sacher is, therefore, one of the most vital of his prossional assets and should be the true function of Training College.

### HE PRESENT POSITION

The present position of the Training Colleges is riefly summarised in the report of the Central dylsory Board of Education as follows:—

"The number of training institutions that exist t present is utterly insufficient for the needs of a

country as vast as India Furthermore, the type of training which these institutions give is often open to serious criticism. It fails to keep pace with modern ideas in education and there is insufficient co-ordination between theory and practice. The curriculum tends to be rigid and the conditions of training rarely offer the students in training or even his teachers an opportunity of ascertaining definitely whether or not he is really fitted for teaching. The result is that many unsuitable candidates who should ordinarily be "weeded out" find their way into the teaching profession".

The above statement which is based on very careful investigation and thorough inquiry shows that there is an urgent need for not only opening new training institutions but also for overhauling the old ones and introducing vital changes in their organisation, methods of recruitment, curriculum and conditions of service.

### RECRUITMENT

The Report of the Central Advisory Board ightly points out that the entire development programme depends on the rate at which trained teachers can be produced. It has been estimated in the Report that there will be a normal intake of 20,000 per year. It is expected that the first five years will be devoted to establishing new training institutions. By the end of the fifteenth year there will be thus 20,0000 teachers over and above those produced by the training institutions now in existence. The output of the present training Institutions, which is about 20,000 per year, is not taken into account as they will be required to meet the wastage of the existing establishment.

On the basis of pre-war standards both in regard to population and cost of living, it is estimated in the Report that the gross annual expenditure on training 2,20,00,000 additional teachers required for the proposed expansion sight energy will be Rs 6,20,00,000. The Scheme suggests that the first five years should be devoted to planning, propaganda and provision of training institutions. Thereafter, the actual carrying out of the scheme should be divided into seven five-year programmes. The main argument for making a lengthy plan of forty years is that the present system of education is entirely incapable of supplying the required number of teachers. Progress cannot outstrip the supply of teachers.

At the end of the fifteenth year, we shall, therefore, have trained only one eleventh of the total number required for the whole country. It is very depressing to think that even after so many years we should only be able to supply such a small proportion of the total number required for the man block of the national system, viz Base Schools and High Schools

The authors of the Bombay Plan' have not given any separate figures for the training of teachers but they have made a comprehensive programme of education which will cost Rs. 4:90,00,00,000. The Plan is divided into three parts, each covering a period of five years. The expenditure to be incurred during each of these plans on education will be Rs. 40,60,000, Rs. 80,00,00,000 and Rs. 3,70,00,66,555 respectively. In the initial period the total amount to be spent has been deliberately kept low because the material resources and personnel available at the beginning of the Plan' would be comparatively low.

Without minimising the difficulties involved in the recruitment of teachers, it must be pointed out that when India has its own national Government, the output of trained teachers could be greatly accelerated The example of Russia, the only country where economic development has been made to proceed according to plan and where conditions have been much more unfavourable than what we may expect in India, can be very heipful to us. In Russia, within a period of 20 years, High School education was made compulsory in towns, and junior school education for the countryside. In 1939, for a total population of 17,00,00,000, it had an army of 10,49,005 teachers and research workers. Why should it be considered impossible for India to train 22,00,000 teachers for a population of 38,90,00,000 (1941) in a period of 15 years? When India is free, educated youth will be inspired to enrol themseives in the national army of teachers. It is, therefore, not unreasonable to suppose that within a period of 15 years we should be able to train the required personnel.

As a short term policy in the immediate postwar years, the fullest advantage should be taken of the great number of young men and women who are working in the armed Forces at present. There are thousands of young men who have been placed in responsible positions on account of their organising capacity and qualities of leadership. If all these young men could be properly remunerated, they would be quite willing to become teachers and work for the uplift of their country.

The new recruits must of course be assured that teaching will conduce to their material and spiritual comfort and will answer to their sentiment of responsibility. The career of teaching will be judged from its social position and the conditions and atmosphere of work. Considerable propaganda and personal contact by experienced educationists and influential leaders will be necessary to induce these young people to proceed to intensive courses in preparation for teaching.

# THE UNIVERSITY AND THE TRAINING OF TEACHERS

The training institutions in our country vary from one province to another not only in the nomenclature of certificates and degrees awarded to candidates but also in the standard aimed at. These training institutions are isolated from the general stream of cultural life and hence the trainees who live in an artitucial atmosphere have no idea of the needs of the society which they are expected and will be required to serve.

Before we take up new schemes of educational expansion and opening new training centres, it is necessary that the intellectual and cultural standard of the training institutions should be raised. And the only way in which this could be brought about is by bringing all the training institutions under the control of the University.

Out of nearly 640 training institutions only 28 are affiliated to the Universities and even they are usually situated as separate units, so that their trainees are completely divorced from University life. The rest of the institutions are mostly under the control of the Education Departments of Provinces or States and they teach the old stereotyped methods of pedagogy which are now quite out-of-date. They have not kept in touch with the modern developments that have taken place in educational theory and practice and still regard the acquisition of subject-matter and rules for imparting it, the tricks of the trade', as an adequate preparation.

By associating the training of all kinds of teachers with the University, the status of the teacher will be raised in public estimation and this is a gain of no mean importance. Moreover, the standard of training will greatly improve and will be brought in vital relation with the main stream of national culture and life. Undoubtedly, the first responsibility of the University is the maintenance of teaching and research of a high order, but its sphere of influence should extend to the various professional schools. The influence of the University, as a matter of fact, should permeate the whole of the intellectual life of the area it serves It is only in this way that the freedom of the professional men, such as doctors, lawyers, engineers and teachers, can be maintained and they can be saved from exploitation by unscrupulous politicians and other interested parties The training of teachers is the work of the greatest national Importance and should be the proper function of the University which is the one institution to which the nation turns for a high standard of intellectual

achievement through a disinterested pursuit of primary importance that a course in sociology should knowledge.

The primary importance that a course in sociology should be introduced in the Training Colleges. This party by

# THE LENGTH OF THE COURSE

The Central Advisory Board of Education is satisfied with only two years of training for pre-primary. Junior Basic (Primary) and for under-graduate teachers for High Schools. It is only for senior Basic (Middle) teachers that it recommends a course of three years. The existing curriculum is so much overcrowded that there is a general feeling that the course should be lengthened to at least three years. The Mcnair Committee which submitted its report to the President of the Board of Education in England recently on the supply, recruitment and training of teachers, have no hesitation in recommending that the normal period of education and training for those preparing for the teaching profession at the age of eighteen should be three years. The whole conception of education is changing and it now means far more than the mere acquisition of certain elementary information by the pupils. It is, therefore, of the utmost importance that the teachers should be fully equipped to meet the demand for a high standard of education. This could be done in no other way than by raising the length of the course for all teachers who have no University degree to a period of three years.

As a short term policy, short courses of training from three months to six months should be arranged to get young men and women oriented towards education and teaching and to enable them to get a rough idea about the nature of problems in education. In course of time these teachers will have to be recalled for a full and proper training course. Such Emergency Centres will have to be started all over the country to meet the pressing demand for teachers. Similar measures have been adopted in time of war for military needs and there is no reason why the same methods may not be followed in time of peace for educational needs. It is only a matter of changing our whole outlook. We could be trained to be soldiers and sailors in a short time to meet the needs of war. If we consider the needs of peace also equally important, it should not be difficult to train teachers to meet emergency measures Planning in this matter should not be difficult if it is merely a question of numbers.

# THE CONTENT OF THE COURSE

There must be a thorough overhauling in the content of the training course if the training is to be related to the needs of the post-war society. Education is only adequate if the teacher knows the social world from which his pupils come and for which they have to be prepared. In the words of Karl Mannheim, the modern teacher should think of himself, "not so much as a school-master but as a life master." The teachers must have a clear picture of the new pattern of the society which will emerge in the present period of peace, if the schools are to be used as instruments for the reconstruction of our social life. It is, therefore, of

primary Importance that a course in sociology should be Introduced in the Training Colleges. It is only by a scientific study of the representative communities, past and present, their social and political organisations and their preferred values that a teacher can think about the problem of social values objectively and thus become the fit guide of a generation that would build a new society. The study of sociology will assist the teacher in overcoming the compartmentalization and limited scholastic concept of education, and will co-ordinate the work of education with influences coming from institutions other than the school, e.g. family, religion and the State. A deep study of the factors which are responsible for the disintegration of our social structure will stop further deterioration of our moral and cultural life.

The courses in psychology and pedagogy that are at present prevalent in the training colleges are too academic and have very little bearing on the everyday problems of the classroom or of the social entronment of the child. The courses should be revised and replaced by Dynamic Psychology and Mental Hygiene. The neademic psychology and mere factual knowledge or technique have their own usefulness in their proper setting but it is much more important to have a clear idea about the growth and dynamic nature of personality. The new kind of education demands a new kind of teacher who has a wholesome personality and an understanding of human behaviour and who knows how human beings can adjust themselves to social living.

# REFRESHER COURSES AND A SABBATICAL YEAR

Most teachers, once they get into school, spend the rest of their lives there. "Once a teacher, always a teacher". This is rather an unfortunate state of affairs which has brought about stalemate in the teaching profession. The teachers are not working with dead matter and it is of the utmost importance that they should keep their mind flexible and their interests fresh if they are to be the true and real guides of living human beings in their plastic period of development.

Refresher courses of three or six months' duration where the teachers may learn at first hand of the latest research and technique in the subjects in which they may be interested should be started. Some advanced countries are already following various methods of continuous education for teachers. In the United States, Colleges and Universities, Normal Schools and Teachers Colleges conduct Summer sessions regularly and it is estimated that about one teacher in four spends the summer vacation in attendance on courses in summer schools. The teachers are granted leave of absence without salary or with half salary and in some cases with full salary less the pay of a substitute.

Educational reforms are taking place so rapidly that the teacher soon begins to stagnate and becomes mechanical if his training is restricted to the years of preparation. The education of the teacher should be continued throughout his career by means of conferences, study groups and Summer courses, if the

<sup>\*</sup>Karl Maunheim; "Diagnosis of our Time"-Page 59 (Kegan Paul)

school is to play its due role in the social progress of the country. Two or even three years of initial preparation are no longer sufficient to keep the teacher abreast of the times.

It will be a very useful experience if some of the teachers spend a part of their holidays in trade. industry or other walks of life. Experience gained in these spheres will prove valuable for their profession. We must revise our concept of the teacher as one who only teaches the three 'R's' to a group of pupils day in and day out. In the times to come it is envisaged that the teachers will be required to do a lot of work outside the school, such as sharing in the labour of the locality (industrial or agricultural), conducting campaigns against illiteracy, helping poor and homeless children, assisting children's clubs and libraries and participating in youth-movements They will have to be the organizers and real leaders of the community. This will incidentally help in breaking the barriers between teachers and society. Let the teachers have some experience of industrial and commercial life and let people who have already worked for some years in other professions become teachers The teacher cannot render effective service unless the social isolation of the teaching profession is broken.

Another reform that is urgently needed is to have a sabbatical year — one in every seven — when the teachers can spend twelve months in some different job pursuing a special netrest, or in some form of educational research, away from the classroom and the children Arrangements should also be made for foreign travel so that they may learn something of the life and thought of other peoples at first hand The Government should arrange exchange of teachers with other countries. This will enable teachers to learn of developments in education in other countries and will also go a long way in developing international understanding.

### THE STATUS OF TEACHERS

Progress in education depends on the quality of teachers and unless the minimum salary for teachers is substantially raised, to talk of educational reform is hypocrisy. No reform is possible as long as the teaching profession remains the 'dumping ground' for all the unemployed and incompetent people. In this

country we have counted too much and too long on the sacrifice of material comforts and worldly pleasure by the 'spiritual' Gurus, with the result that our young generation is left in the hands of inferior talents. The third class rates' have not attracted 'first class ability' (with the exception of a few noble souls for whom we have great respect and admiration) and society must cease making further futile attempts at this experiment.

The Central Advisory Board of Education have rendered a great service by fixing the minimum national scale for teachers, but even that is inadequate for attracting men and women of a high calibre Moreover, these scales should not by any means be considered final. The scales should be revised from time to time to meet the cost of living as it rises. It is only when the attention and interest of teachers is directed away from preoccupation with their economic condition that they will be able to give serious thought to the fundamental and important problems of education.

In addition to improvements in the remuneration of teachers which open up a genuine career, provision must be made for pensions and provident funds Special facilities such as the education of their children, arrangements for recreation and the privilege of purchasing supplies at concession rates should be given to teachers as is done in Russia. The teacher will give his best to society only when his lis made a little more colourful and comfortable.

# CONCLUSION

Reforms in education presuppose that India will soon be free and will have its own National Government. Without this, all our plans and projects will come to nothing. But mere political freedom will not solve the problem. It is further envisaged that there will be equality of opportunities in the economic and social spheres, and the new State will be founded on co-operation and community effort, and special privileges and competition will be discredited. These are the two basic assumptions underlying reforms in teachers' training or as a matter of fact any social reconstruction. When the general framework of our social structure is ready and the true position of the teacher in it is fully recognised, it will be an easy task to adjust the needs of the one to the other.

# PLANNING OF TECHNICAL EDUCATION

# A. V. NATH

Prof. J. V. Nath, M. Sc., Eng. (Lond.) D.I.C., M.I.E. is Assistant Director of Training, Calcutta, and was some time Ingineer and Assistant to the General Marter Mechanica at the Tata from and Steel Co., Let Junishelpre, flow as Research scholar on Internal Combistion Engineering and High Speed Direct Empire, and Head of the Mechanical Engineering Department, Cottege of Engineering, Guindy. He acted as Senior Regional Inspector, Gost. of India, organizing different berhaveal translag whenes for evil and defence secretics.

Prof. A. V. Nath howevery ably champoned in his article the wegent need and importance of introducing nation with schemes of technical chievation. He has conclusively pointed out how the air has certaicle rat opportunities for hundreds of our young need to undergo calable training in different little of trade and industry. The apprenticeship which these young men have undergone under militing discipline should be properly agriduated by toking them into different cut technical policy on to keep pase with our contribution with a double purpose, first, immediate action and, second, a long-range process, the schooles that it is only by proper und adopted environmental calculate action and second, a long-range process, the schooles that it is only by proper und adopted to gratition that such education would become a valuable anaximy to our discloping frends and industry. He has also envisaged in detail the necessary administrative establishment to run the valuous schowers both in the proprinces and at the center.

The outset it should be emphasised that there is no essential disunity between Technical Education and General Education. Technical Education is only an extension of General Education and while it also aims to develop and expand human abilities so as to fit any person to be a worthy member of society, it lays special stress on the development of a cultural outlook more practical and realistic to suit the needs and interests of Industry and Trade. The preparation of an adequate number of the country's population for earning a livelihood by efficient service in different trades as required by Industries and Commerce is the major concern of a Technical Education System.

### THE NEED FOR A CENTRALISED POLICY

The growth of Industry and the progress of Technical Education in any country are complementary. The history of the younger industrially advanced countries vividly shows that the development of an organised Technical Education System is a necessary prejude to Planning for Industrialisation. Plans for post-war Technical Education have aiready been prepared by many Provinces and States. These plans are drawn up with reference to local requirements and local resources, and however complete or satisfactory they may be to the particular

State or Province, they will require to be reviewed in the light of the needs of India as a whole. The War' brought India, as never before, into the forefront of world affairs and conclusively showed that the place she would occupy in the comity of civilised nations of the world would be decided entirely by her will and capacity to progress with the rest of the world, in Science, in Industry and in Commerce. To achieve the requisite progress it will be imperative for India to plan her policy of Scientific Progress and Industrial Development as a single geographical and economic unit, keeping in view as the guiding index the achievement of a high industrial and scientific standard on a par with the rest of the world. Domination by local issues, domestic differences and man-made boundary demarcations between Provinces and States merely serve to narrow our vision and prevent visualisation of a future India, as a single unit, occupying a legitimate and respectable place among the rest of the nations of the world. The full exploitation of the industrial resources, development of key industries, national defence services and economic strength can be achieved only by adopting a co-ordinated centralised policy It is not denied that iocal for India as a whole conditions, local resources and requirements of

particular classes of Industries in specified Provinces or Areas must largely influence the subjects of study and training in the technical institutions of those areas, but a centralised control in all matters of 'Technical Education Policy' and 'Standards' should prevail in order to avoid overlapping, dissipation of efforts, non-uniformity of 'Standards' and wastage. There is also no alternative to State control in certain fields essential to the country such as:-

Military and Armament Sciences; Diplomatic, Consular and Trade Services: Specialised Study and Research Institutions in all branches of Science and Industry, which Provinces or States cannot adequately deal with,

In planning Technical Education in India special consideration should be given to the fact that she will be a new entrant into the field of industrialisation and as such, her position will compare more with similar recently industrially advanced countries of the world than with the older industrialised countries. An equally important factor that should guide the shaping of future Technical Education is that the recent war has taught many lessons to the belligerent nations which they are bound to incorporate in their future reforms in the field of Technical Education Many undertakings have learnt to face and adapt themselves to rapid and unexpected changes as a result of new scientific knowledge from research, changes of supply and demand to meet the enemies' tactics and to produce new weapons of war The successful developments of scientific and technical education in U.S.S.R. and U.S.A have been the subjects for study by all other countries. It goes without saying that all nations will be revising and re-shaping their technical education system in the light of their experiences and lessons learnt from the War .

The new pattern of Technical Education for India should keep in view the shape of things to come in the light of the above mentioned facts. It is obvious then that it is too premature at present to forecast any finalised scheme for future Technical Education except in the broadest outline, A long range policy will have to be carried out over a number of years, and it must be sufficiently elastic to enable methods to be suited to unforseen changes in conditions which are likely to arise from time to time. It will also require the co-ordinated efforts of various representative bodies such as the State Departments representatives of all trades, industries, commerce. services, technical institutions, employers and labour,

As is being done in all other countries in matters of reconstruction. India has to tackle her post-war Technical Education under two heads:-

\*In Great Britain the subject of post-war and Scientific Education is "In orest Bittain the subject of post-war and Scientific Education is being studied by a number of Committees and Public Hodies such as:—
(1) The Royal Society.
(2) The British Commonwealth Scientific Committee
(3) The Parliamentary and Scientific Committee
(4) Nuffield College, Oxford.

The Federation of British Industries.
The Colonial Research Committee, etc., etc.

1. Immediate Action with the objective of adapting the war-released technical personnel, equipment, machinery and organisation, so as to meet the requirements of Civil Industries, during peace time:

2. Action with a long range objective to establish a permanent Technical Education system suited to the needs of India and to put her on a par with the rest of the world.

Both these are detailed in the following pages.

#### PART I

SCHEME FOR ADAPTING THE VARIOUS WAR-RELEASED TECHNICAL PERSONNEL, EQUIP-MENT, MACHINERY AND TRAINING SCHEMES TO CIVIL INDUSTRY, AND OTHER IMMEDIATE ACTIVITIES DURING PEACE TIME

A very large number of technical men are being now released and measures to rehabilitate them in civil life are being made. New industries established In India under any planned scheme of Industrialisation will have to rely mainly on these technical men from the services as the planning and execution of a revised scheme of Technical Education will take some time, and even after the scheme is put into operation, a further time must necessarily elapse before a regular supply of trained men can commence The hard work and disciplined life that these men have undergone in the Services would fit them admirably for being recruited as pioneers in Civil Industry in all ranks and for training further recruits The immediate plan of action for reorganlsing Technical Education should give this large number of technical personnel of the Commissioned Officers, Non-commissioned Officers and Lower Ranks of the Services, such special and supplemental training as will fit them to civil industries that would be inaugurated under a planned industrial development scheme By adopting the steps suggested below it will be possible to meet most of the early demands of new industries in the categories:-

(i) Executives, Managers and Engineers: (ii) Foremen and Supervisors; and (iii.) Skilled workers.

# SUGGESTED STEPS FOR IMMEDIATE ACTION

- 1. Provision of the Necessary Organisation. In order to achieve full success, the composition of the organisation should be such as to secure the greatest collaboration from all government departments, administrative bodies, technical institutions, employment exchanges, and all organisations of employers and Iabour.
- 2. Method of Dealing with Service Technical Personnel. The demobilised men can be classed under three categories and each of them should be dealt with as below:-
  - (i) Men of the Commissioned Officers' Rank and highly qualifled young men consisting of University graduates and others will have to be prepared to take up executive and superior posts in Industry, by:-

- (a) Providing special and supplementary courses of study and training in selected technical, engineering and commercial institutions in India to shape them to the demands of future Industries.
- (b) Arranging for their further practical training in the works of organised industries in India.
- (c) Sending them abroad for further speclalised training under special arrangements including grant of scholarships with prospective suppliers of machinery and plant to India.
- (ii) Men of the Non-Commissioned Officers' Ranks and other supervisory personnel, who are also of the better educated class but who are not fit for executive positions, can be trained to all ranks of subordinate officers, supervisors, foremen etc., by adopting a procedure similar to those mentioned above for commissioned officers.
- (iii) The largest number of war service men available will belong to the lower ranks with sufficient education and intelligence to become skilled workmen. For their training and adaptation to industry, the various technical institutions contemplated under item three below should be used, and this should be followed by training in industrial workshops and establishments in India.
- 3. Utilisation of Various War-time Training Schemes. The Training Schemes such as the War Technicians Training Scheme of the Labour Department, the Air Force Mechanics Training Scheme, the Bevin Training Scheme, and all other Training Schemes obtaining in the Ordnance Factories and Army Training Depots, together with their resources, equipment, and staff which are likely to be dispensed with now should be suitably revised and altered to serve civil industry and to fit in with the needs of a planned future Technical Educational Scheme.
- 4. Apprenticeship System in All Industrial Establishments to be Enforced by Legislation. Legislation should be adopted (as was done in France after the last war) to enforce all established industrial concerns, factories, railways, and port trusts to provide regular schemes of apprenticeship training in all ranks, viz., superior and executive personnel, foremen and supervisory ranks, and skilled workers. It should be incumbent on all industrial concerns to provide adequate staff to organise and supervise such training in their establishments. These arrangements should form part of a permanent scheme of 'Apprenticeship Regulation' in future as it is the duty of organised industry to contribute its share to a national Industrial Education Scheme by providing facilities for apprenticeship. The necessary machinery for the Registration, Supervision and Issue of Competency Certificates by the Government should also come into existence.

5. Steps for the Training of Experts and Speclalists in all Branches of Industry. A special and comprehensive programme to train a large number of Experts and Specialists from experienced technical men in India should be undertaken so that, as each new industry is established under a planned development scheme, the requisite number of experts to replace Imported technical men within a stipulated period of 5 to 10 years will be available in India, and each industry can arrange for the training of future experts and specialists within itself. This item of work should be given the greatest immediate attention, since the ultimate staying power of all industries, however well they may be backed by State help, will depend on their own ability to continuously forge ahead with new and improved applications of science to industry India's ability to progress on a par with a fast-moving industrial world containing many long established rivals, will be solely dcpendent on the measures taken to build up and maintain an adequate staff of specialists and experts in all branches of science and industry.

# PART II

SCHEME FOR ORGANISING A CO-ORDINATED SYSTEM OF TECHNICAL EDUCATION ALL OVER INDIA

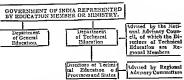
A Central Department of Technical Education.

Following the procedure adopted in many industrially advanced countries, it is suggested that a separate Department of Technical Education be constituted under the direct charge of the Education Member or the Ministry of Education, to direct and control the Technical Education System of the country in all matters of policy, progress and standards.

This Department of Technical Education should be advised by a National Council of Technical Education consisting of Technical Experts drawn from all employing organisations in Trade, Industry and Commerce, Government Technical Departments and Technical Professions. Their expert knowledge, advice and co-operation in the various branches of Industry and Commerce would help to shape Technical Education to sult the economic needs of the country.

In order to ensure that Technical Education in all the Provinces and States is co-ordinated to a unified National Policy, the various Provinces and States should be requested to appoint a Director of Technical Education for their respective areas (or on a Regional Basis to cover adjoining States and Provinces). These Directors from the Provinces and States should be ipso facto Members of the National Advisory Council They should constitute Local Regional Advisory Committees whose members should be selected locally from Technical Representatives of Industry, Commerce, Technical Institutions and Services and it will be their duty to ensure that Technical Education in their areas is in accordance with the Policy and the Standards set by the Central Department of Technical Education

The following chart outlines the entire organisation:-



In selecting the Members of the National Advisory Council, it must be borne in mind that the heaviest criticism against the present Technical Education System Is that it does not enlist the cooperation of Industry and Commerce and that its products are not of the type that employers require. It is, therefore, necessary that the representatives of various Trades should be picked men with sound experience and knowledge of the requirements of their trade or profession and able to define the educational and technical attainments of recruits of ali grades for entering the particular Industry and guide in formulating a course of study and practical training suited to lt.

The following composition of the National Advisory Council of Technical Education is suggested:-

# COMPOSITION OF A NATIONAL COUNCIL OF TECHNICAL EDUCATION

The Members of the National Council should be selected so as to represent the various Trades. Employing Organisations, Professional Institutions, State Departments (Technical), Representatives of Universities and Technical Institutions as outlined below:--

S No

Serial umbe:	Interests and Organisations represented,	No of Repartment
1.	Agriculture, Porestry, Plantations and Food Indu	15-
		2
2.	Mining and Metallurgical Industries	2
3		
4	Public Works Departments, Municipal Corp	0-
	rations, District Boards etc	3
5.	Electricity Departments and Corporations	2
6.		3
7.		3 3 2 2 2
8.		Z
9.		2
10.	Textile, Jute and Silk Industries	1
11.	Chemical Industries	2
12.	Cement, Ceramics, Plastics, Bricks, Tiles etc.	1
13	Government Services, Fost and Telegraphs, Pr	10- T
14	Universities	2
15	Yandibahan of Theorem (Yadaa)	1
16	Mining, Metallurgies and Geological Institute	J
	ledis	
17.	Commerce, Shipping, Banking and Chambers Commerce	of lo
18.	Labour Organisations	í
19	The National Institute of Sciences of India	2 1 2
20.	Principals of Technical Colleges and Institutes	5
21.	Department of Scientific and Industrial Research	1
22.	Members of the Education Department, Gove- ment of India (Technical and General)	ru-
23.	Regional Members who will be the Directora Technical Education of the Provinces and Stat Bengal and Assam I. Behar & U. PI. Punnsh	ol es.
	Bombay & Sind I, C. P., Berst & Orissa	
	Madras & States-1, Hyderabad-I, Mysore-I	8

Total ... 50

# METHODS OF WORK OF THE NATIONAL ADVISORY COUNCIL

The Members of the National Advisory Council of Technical Education should form themselves into ten or more Sub-Committees, each committee to deal with particular Industries, Trades or Professions. Eleven Committees are suggested, one for each of the following groups:-

- I. Engineering, Mining & Metallurgical Industries.
- Electrical and Power Plant Industry.
- 3. Textile and Fibre Industries.
- 4. Agricultural, Forestry, Plantations and Food Industries.
- 5. Railways, Harbours, and Port Trusts.
- 6 Commerce, Banking, Insurance, Road and Water Transport.
- 7. Government Services (P.W D's, Factory Inspectors, Boiler Inspectors, Post & Telegraphs).
- 8. Chemical and Pharmaceutical Industries.
- 9. Small Scale and Cottage Industries.
- 10. Vocational, Training and Research Institutions-Apprenticeship, Scholarships, Stipends, Fellowships etc.
- Defence Services.

Each Sub-Committee will co-opt one or more Members so as to include in it representatives covering all Trades and Branches of the group. They will make a thorough survey of the particular group of Industries and Professions by visits to industrial establishments and Training Institutions and by personal contacts with responsible Officers and Associations and in this way obtain reliable first-hand statistics which will enable them to offer advice and suggestions regarding the present and potential capacity for training and absorbing skilled workers of all Grades. A General Data form and questionnaire is to be supplied to serve as a guide for recording statistics of every Factory, Organisation or Works in India. After a complete survey has been conducted in this manner, the essential data gathered will be consolidated and tabulated into a convenient statement to be presented to the National Technical Advisory Council.

The above Statistics will give complete Information as to the present stock of Technical Education facilities as well as the demand by Industry and Commerce for trained workers. These, together with the requirements of any contemplated National Economic Development plan, will be the basis for reorganising the entire Technical Education System of the Country.

The functions and duties of the National Advisory Council will be:-

I. To survey the Technical Education System of the Country, Industries, Commerce and Services and consolidate on a Regional Basis all relevant Information on the present and potential requirements of Trained workers and the capacity of existing Technical Education System to satisfy the demand both in quantity and quality.

- 2. On the basis of the above and the basis of the National Economic Re-construction Plan contemplated by the Government, to advise on the formation of a net-work of Vocational and Technical Institutions adjusted as regards numbers, location and curricula to the economic requirements of each region or locality and affording the workers adequate opportunities for developing their technical knowledge. This would incorporate full utilisation of the various Technical Training Schemes already organised during the war, suitably modified.
- 3. To advise on the organisation of courses and training for each branch of economic activity in the grades:—
  - (a) Managers, Superintendents, Engineers, Research Workers etc.
  - (b) Foremen, Supervisors, etc., and
  - (c) Skilled workers

They will advise for each category of workers the curricula, syliabus, standards and methods of work in Technical Institutions so that their products will have the requisite educational and technical attainments suited to the needs of Industry, Commerce and Services.

- 4. To advise on measures to be taken to give an industrial bias in all stages of General Education so as to divert an adequate proportion of the best brains of the country to nation-building activities and thus create a class of Educated Workers who constitute the backbone of Industry in every advanced country by:—
  - (a) Introducing Vocational Subjects in the curricula of General Education.
  - (b) Providing the necessary incentives to attract scholars and young men to industrial pursuits instead of aimless literary careers.
  - (c) Prescribing higher scales of salary, prospects and promotions to all grades of Skilled Workers in Government Departments, Rallways and other quasi-Government services, in recognition of the longer periods of study and training, and expenditure involved in qualifying for technical professions\*
  - (d) Drastically reversing the present policy of posting purely secretarial and non-technical men as heads of technical departments and denying to technical men entry to secretarial and policy framing positions.
  - (e) Reserving a few guaranteed posts in various Government, Rallway and other Services to
  - \* Nore.-It is expected that Industries and private employers will follow the standards set by the Government Services.

Workers passing Technical Examinations with the highest credit.

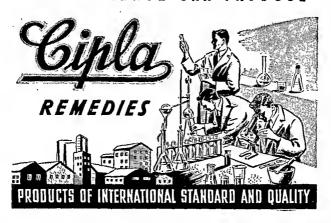
- 5. To advise on the establishment of a System of uniform standards on a national basis in the award of Degrees, Diplomas and Certificates by Universities, Technical Institutions and other bodies, so that workers seeking similar or identical qualifications in any Institution or University in India are eiven:—
  - (a) Uniform conditions and duration of study-
  - (b) Uniform minimum standards of attainments, general and professional.
  - (c) Equal recognition all over India for similar or identical Degrees, Diplomas, and Certificates, etc., awarded to them.
- To advise on the establishment of a System of National Certificates in all Occupational Trades with the help of Professional Institutions like the Institution of Engineers (India) etc.
- 7. To advise on the establishment of a System of Regulation of Apprenticeship applicable to particular occupations or groups of occupations and its details like:—
  - (a) The rights and duties of an employer to train Apprentices.
  - (b) Age, admission, qualifications, physical and mental aptitudes etc., of Apprentices.
  - (c) Registration, duration, supervision, tests, Issue of Certificates of competency etc. of Apprenticeship.
  - (d) Organization for the supervision of Apprenticeship.
- 8. To advise on the establishment of a system of Supplementary Education to workers already engaged in Industry and Commerce to enable them to improve or extent their Technical Knowledge or Qualification.
- 9. To advise on the establishment of a sufficient number of Vocational Schools in the occupations which mainly employ women and girls.
- 10. To advise on the measures for encouraging unemployed persons to attend supplementary courses of General and Vocational Training
- 11. To advise on the steps to be taken for collaboration between the Administrative Bodies, Technical Institutions, Public Employment Exchanges and Occupational Organisations of Employers and Workers.
- 12. To advise on the establishment of a coordinated System of Research Institutions for carrying out:—
  - (a) Development and Research Work;
  - (b) Testing and standardization of Industrial products, plants and processes.

- (c) Investigation of general and specific problems of Industry.
- 13. To advise on the establishment of Technical Teachers Training Colleges to provide an adequate number of Teachers with pedagogic aptitude and theoretical and practical knowledge in different Trades and Professions.
- 14. To advise on the methods to be adopted so that Technical Teachers of the Superior Type—Professors, Readers, Instructors and Research Workers—are afforded means of keeping in touch with the practical side of their professions and acquiring knowledge of the latest developments in their fields by:—
  - (a) A System of Exchange of Staff between Services, Industries and Technical Institutions.

- (b) Liberal grant of study leave, foreign tours, scholarships etc.
- 15. To advise on the establishment of National Libraries and Scientific Museums in various Regions,
- 16. To advise on all matters that will improve the efficiency of Technical Education in India and its contribution to the economic advancement of the country.

The Constitution of a Central Advisory Council and the necessary organisation for prompt execution of its decisions will be the first move for laying the foundations of a national system of Technical Education for India. The decisions of this Council should be reviewed every 5 years in the light of achievements, and the trend of world progress.

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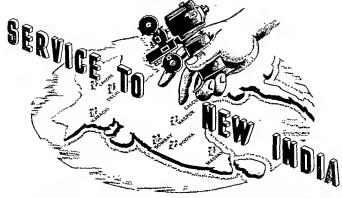
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# ARCHITECTONIC PLANNING

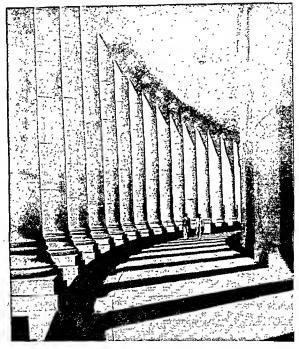
H. I. BILLIMORIA

H. J. Billimoria, A.R.I.B.A., A.I.I.A., is Hon. Editor, Journal of the Indian Institute of Architects, Member, Government of Bombay, Higher Art Examination Board; Viviling Lecturer, Sir J. J. School of Art, Bombay.

Ir. Billimeria develops an approach not so far effectively realised in planning programmes in our country. He stresses that human acticities in the field of Planning depend upon snammarle and homonly related physical environment for their functioning. Persuasively he argues that the psychological effect that this environment can have on the Individual and on collective groups is a profound factor in the ultimate building up of a national community. The shilled process of making that environment harmonious and healthy is strektechnic Planning. It invoices planning on the basic of cellular units of organic growth developing from hald idual units of activity to those of community groups in an uscending order of illages, towns and cities. These are interselated and hant in an ultimate pattern of human environment on a national scale conceived as a balanced relationship of whom and rund time, Such is Mr. Billimoria's constructive vision. Its implications will have to be seriously considered by all who are interested in the planned verifiers of the country.

LANNING to-day is front page news. It has reached a stage when its possibilities for the uplift and welfare of the human race are being increasingly realised. Progressive nations have given it serious attention in the form of national policies, and in such leading countries as the U.S.S.R., Great Britain and the U.S. A. it has now assumed a tremendous and significant form. Inter-related in these planning policies in the West is the architectonic factor - a factor which as yet is apparently an unknown quantity in the Indian field.' But while planning movements in the West generally were an outcome of the effects of the First World War, in India the importance of planning as a remedy for national ills was not well realised until much later. The appointment of a National Pianning Committee by the Indian National Congress towards the end of 1938 was the first serious and important effort to face facts and see what could be done. While credit must be given to the valuable

services rendered by the Committee under the chairmanship of Pandit Jawaharlai Nehru, it is to be regretted, in the interests of national planning, that the architectonic approach or outlook was noticeably absent. Later, Government itself began to actively take up the question of Planning. A great deal of spade-work has been done, especially since the appointment of Sir Ardeshar Dalai as the Member for Pianning and Development. But here too, as well as in the various other individual or collective plans put up by unofficial sources, the architectonic approach seems absent. That such an approach is necessary in the field of planning is, however, an aspect taken for granted in the planning policies in the West. Britain, for instance, has today a specially created Ministry of Town and Country Planning for the purpose; while the latest Town and Country Planning Bill now before Parliament seeks to improve in some measure the shortcomings and defects of previous legislative enactments in this field.



These moulded and massive pillers depict the fusion of beauty and strength. It can best be seen in architecture and in architecture planting. But such fusion it an important parts of the good which all planners aim at. If the mind of the architect can design these pillers, purely the vision of the planews can help to Isahiace graculal life and a stronger nation.

Further, in the U. S. S. R. and the U. S. A., problems are being tackled on a larger architectonic scale in their great national planning programmes. Let us, therefore, see what this architectonic factor is and how it can be related to the Post-War National plan.

# THE ARCHITECTONIC APPROACH

"Planning" Is in Itself a much misused and abused term. With the interest that this subject has aroused over here it is now the fashion to talk of "blue-prints" and "specifications" for "plans" for one thing and another. It is perhaps amusing to reflect that while these are terms unconsciously borrowed from an architectural vocabulary, their users often know practically very little, if at all, of the meaning and value of Architecture and its significance in human living. The instinctive use of such well-worn phrases as "God, the Architect of the Universe", and "Man, the architect of his own destiny," expresses the subconscious psychological working of man in this acknowledgment of the function of creative and constructive planning as being peculiarly within the sphere of the architect. This is perhaps natural, as the process and technique of planning is nowhere more intensely related and technically emphasised than in the study and practice of Architecture. Be it the smallest fitment or unit in a house, or the largest and most complicated organism of a town, the principles and techniques of architectural planning apply. This being so, it would be interesting to see how it is possible to embody this idea in a scheme of national planning.

While intense thought is being devoted to the activities embraced by the material and, on occasion, the moral factors of human life, it is generally lost sight of that, with few exceptions, these activities require man-made or humanly related physical and moral environment for their functioning. The degree of efficiency of such functioning will further certainiv depend on the degree and quality of such environment. For example, it is worthless planning the economic and technical aspect of industries unless we have efficient, well-planned factories to house these industries, and unless we co-relate the resulting problems of housing for the workers, the inclusion of suitable environment for such needs as education and amenities for their children, and the provision for their own marketing, for their recreation, for their health and for their intelligent interest and activity as responsible citizens in a free democracy. We cannot, again, for instance, plan for health unless we eradicate dangerous festering slums and prevent their recurrence, unless we have better principles of open spaces and much healthier and higher standards of housing, unless we have efficient well-planned hospitals in open layouts for each community neighbourhood, and unless we have large park areas as lungs, so that there will not only be planning for the relief and cure but also the prevention of ill-health.

The efficiency of any activity will necessarily be proportionately related to the efficiency of the

surrouodings in which that activity functions or is housed. This is an acknowledged truism that has guided the formulation of planning policies in the West. Further, when we consider another truism, that the psychological reaction of environment, for better or for worse, exerts a powerful influence in the building up of an individual and of society, we have to give serious thought to the immense possibilities that man-made environment can offer for the cultivation of the moral and cultural aspects of a much finer national community. The saying, "Man builds the city so that the city shall build his sons", is pregnant with a whole world of meanine.

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We can, therefore, understand that the architectonic approach in a National Plan is the broad conception of co-related physical-moral environment for the economic, social, material and moral welfare of Man.

To appreciate the tremendous range which this environment covers we may, for the moment, cast a brief glance at the general composition of the picture.

Planning for a particular and individual need or activity, as, for instance, the interior of a room for living or sleeping or working, or a complete house, or a factory, a business office or bank, a hospital, a canema, a market, an aerodrome, a school, a university, a swimming bath or a stadium, or even such items as bus shelters or telephone klosks in the form of street furniture—planning for these comes within the comparatively narrower sphere of 'Achitecture' as generally applicable and understood. When some of these elements are related in a pattern, they still come within this restricted interpretation of Architecture, as for instance a small housing scheme or a recreation centre.

The moment, however, these elements begin to assume greater collective relationships in area and significance, and where consequently the environment is more on a scale of collective rather than individual needs, the sphere of architectural service is widened in terms of town and city and village and country planning. It is here that the architect, trained as he is to plan, emerges with further and intensive training or experience into the realm of town and country planning.

On this broad and comprehensive canvas various activities of Man go to form the elements that, if well-knit and inter-related, produce a composition that emerges as a complete and coherent picture, rich in its values and truly expressive of a great national community. For the picture there are such elements as Agriculture, Industry, Trade, Transport and Communications, Housing, Health, Education, Social Weifare, Recreation, Culture and Moral Uplift. It is mostly these elements to which "Planners" here have given and are giving such intense thought. Our alm, however, must be to see that these are woven or blended into the architectonic pattern that is so very necessary if all of them are to be of the fullest value in the intensely vital organic life of the community.

The architectonic relationship, then, will be on the basis of a great general master plan at the national plane, effectively workable in increasing detail at regional, provincial or autonomous state, subregional and district levels. The planned co-relation and working of basic units of population and social groups, influenced by national resources, will help build up in successive stages the pattern of the allembracing national plan.

# PLANNING FOR VILLAGE, TOWN, CITY AND COUNTRYSIDE

The basic units of man-made environment for develop into vaster and more complex community areas and organisms in the form of cities. And villages, towns and cities in relation to the spreading countryside and natural regions finally form the material pattern of a nation. Let us now, therefore, first take the village and the town as basic units and look into their possibilities for human welfare

# THE VILLAGE -- ITS IMPORTANCE

In India, predominantly agricultural as it is, the village as a unit must receive serious attention in any scheme of national planning From the time of the earliest Aryan settlements in India the village has been the foundation of the social, political, economic and cultural history of its peoples. Today, with 7,00,000 villages throughout the land, we must not subordmate the importance of agricultural and rural values in the present atmosphere that is so much charged with ideas and plans for industrialisation and consequent urban development.

#### THE VILLAGE IN ARYAN TIMES

It may perhaps surprise many to know that in ancient India the Aryan village was laid out to a definite plan and that town-planning principles were well-known. The Shilpa Shastras deal with such principles; and various types of village plans, such as the Dandaka, the Padmaka and the Swastika, are described It is not possible for us here to go into the interesting details of such planning, The basic idea, however, was the laying out of environment for a self-contained community group in the form of an enclosed village unit. Within this unit, bounded by a defensive enclosure, were well laid out main and subsidiary roads, open spaces, tanks, wells, the village temple and the village hall, and areas apportloned for the living and working of the various social strata and activities of the communlty : \* Gates, related axially with the village layout, were in the enclosure. These "gow purams" or cow gates let out in the morning the cattle into the pastures and fields around the village and were closed after they had returned in the evening. Here was a communal life well planned, well ordered and well housed.

# THE VILLAGE TODAY

In tragic contrast the present-day village is nothing but an ill-assorted jumble of huts and structures often strung out along a traffic road to form but an example of the evils of ribbon development. Ribbon development actually means the indiscriminate uncontrolled mushroom growth of structures on both sides of a public highway or traffic artery where the primary and Important collective function of traffic is put out of gear by the needs of the individual units of buildings strung along a highway. Such a process is dangerous from the viewpoint of through traffic in relation to local inhabitants, especially children. It further creates such evils as dust and dirt, noise and lack of residential peace and privacy, besides the irregular encroachment and defacement of a highway whose purpose is essentially for public and not private service.

It must be the endeavour of planning, therefore, to gradually so change the present order that villages once again became happy, peaceful units of well planned, well ordered and well housed community groups, away from fast-moving traffic arteries but connected to them by feeder roads.

#### THE VILLAGE OF TOMORROW

Let us now see how one such viliage could be planned. It has been found that on an average about a thousand people could form a convenient residential unit. As this basic unit will have a bearing on the kind of town development that we will consider a little later, let us take this as a common factor and picture our viliage as an architectonic environment for round about a thousand people on an average. The plots for cottages and huts could be distributed on the principle of 12 houses to an acre which, though usual for such cases in town-planning in the past, need not, however, be rigidly adhered to and may be taken only as a guide The cottages will be distributed in pleasant groups around proportionate open spaces with shady trees and away from traffic so that peace, security from accidents (especially for children) and facilities for the recreation of children and of adults in the small individual open spaces within a group are provided for.

For the needs of the community a village temple or mosque will of course be required; so also will a modest village or community hall which would be useful for the meetings of the village elders or the Panchayat, as well as the formal and informal functions of the villagers, ceremonial, communal, recreational and cultural. These two Important units could therefore be prominently sited in relation to a pleasant village green which would form the centre or the heart of the village. Amongst other requirements a primary school for the education of the children would be necessary and so would perhaps a small reading room for the benefit of the older folk. The school would naturally have a secluded playground of its own-a vital necessity which unfortunately most Indian educational institutions, from the primary school right up to the collegiate

This allocation and relationship of areas for different activities and social standards is termed "Zoning" in modern town planning language.
 As will be seen, however, the activity of zoning was understood and practised millenniums ago in An an India.

stage, so often lack. A small creche, where tlny tots could be taken care of while the parents are out in the fields or at other work, would be a very welcome amenity. A few shops for everyday things, and especially a tea-shop with facilities for tea, pan-supari and even food, would be conveniently sited in the layout. All these amenities should be within easy walking distance of, say, five to seven minutes from the living zones of the villagers, Further, as these would be essentially villages for agriculturists (though cottage industries could be a side line and be encouraged by the State), provision would have to be made for cattle sheds, grain stores, and manure pits. At least one well in each zone would of course be a prime necessity.

It should be seen that no traffle route linking village with village or with town should pass through the heart of the village, as is so often the case at present. Such roads should skirt the fringe of the village and a feeder road from the main traffic route should lead into the village itself. By this means the village will be free from unwanted traffic, accidents, dust and noise, and will be a self-contained unit free to develop a pleasant community living, environment and character all its own.

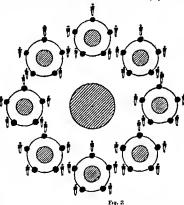
The viliages would have no rigid diagramatic boundaries, but their areas would be inter-related with and inter-penetrate into the surrounding countryside. A number of such villages could be grouped around a small market town which would be a clearing house for agricultural produce and be a source of greater communal amenities not economically possible in the smaller individual village.

# THE SMALL TOWN OR COMMUNITY NEIGHBOURHOOD

From the village to the town is a step towards problems of urbanisation. Towns have generally grown outwards from a central core or heart. The process may be likened to a tree trunk which grows ring after ring around its core as the seasons advance. Towns, too, have grown in this way throughout the years, but every additional ring makes a town more and more unwieldy and creates greater problems of traffic, population density, congestion, inflation of land values, slums, lack of open spaces, and a senseless jumble of activities which in actuality mar its organic growth. In time, such a process results in an alarming sprawling development which renders it a city of unmanageable proportions with, consequently, serious problems to tackle. London may be cited as an example of an extreme case (fig. 1), but Indian towns and cities are no exception, though on a smaller scale. Bombay and Ahmedabad are examples of the larger type.

To prevent the city overpowering the citizen and leaving him floundering in a tangle of his own ereation, the principle of de-centralisation of towns and of industrial activity seems now one of the best possible solutions. A city, instead of being one vast stretch of unmanageable, populated and working areas, would consist of a number of community units and small towns divided up by green belts or open areas and countryside but connected by fast-moving traffic routes to each other and to a larger administrative, business - executing and entertainment providing parent town at the centre of the group. .

To better visualise this in a little detail let us go back to our village residential unit of 1000 people. Let us take this as a basic unit for urban development. A residential unit of 1000 cannot naturally provide-



The medium town unit of 40,000 fa the diagram each man represent a residential unit of 100-people with 1s centrice. Five anch units sharing larger services build up the community neighbour, hood or small town unit of 500. Eight such unit enjoying intreaed amen ties from the structure of the inclumit own.

for communal amenities on a larger scale. These, therefore, to be econo-

mical and useful must be shared by a number of units. 5000 is found to be a

good workable figure and let us, there-

fore, group five residential units toform what may be termed a community

1914

Fig. 1

ity grows without a plan. The aprawling, uneconomic expansion of 150 years is wirdly acra in these four stages of development shows last stage is especially trage. Must our locian towns and cities for lack of visionary planning?

neighbourhood (fig. 2). This neigh-Hundred and ciehty fire bourhood of 5000 or thereabouts may be taken as the first stage of a town's development and may in fact be considered as the smallest town at the foot of a graded scale of urban growth.

Such a grouping of residential units into a community neighbourhood would enable the provision of such amenities as a sociable little shopping centre with rather bigger shops entailing only weekly or biweekly visits for household requirements, a restaurant or two where good meals could be obtained; a bigger place of worship to be used especially on special religious days of the year; a small market within easy reach of the residential units; a club or community building where social functions, meetings, games, entertainment, concerts, amateur theatricais and Indian dances, and other social and cultural activities could be pursued; a small health centre where a few doctors could keep a watchful eve on the health of the neighbourhood and give treatment and advice to those that may be in need. For a population of 5000, a secondary school would be necessary, and would be so sited as to be of convenient and safe access from the various residential units; If desired, this could be planned in two inter-related sections, one for boys and the other for girls. The need for an adequate playing-fleid as part of the school lay-out cannot be over-stressed. A lending library would be another necessity, catering as it would for the intellectual, literary and general cultural uplift of adults and youth silke A small fire station, a post office and a police station would be among the other usual local requirements that would have to be efficiently related in the lay-out. A few offices would probably be needed while some small scale local industries would be useful, for the aim should be to make these neighbourhoods organic and self-contained to a reasonable extent and prevent them from developing into mere dormitory areas for the citizens. A park, of course, would be imperative as it would form an effective lung towards the centre. In fact, if the whole neighbourhood is planned in the right way with skilful inter-relation of open spaces and built-up groups, the neighbourhood would in itself assume the advantages of a park.

#### THE MEDIUM TOWN

A neighbourhood or small town unit of 5,000 cannot, however, provide all the services and features that are usual in urban living. We must, therefore, go a stage further and, on the same principle, group, say, eight neighbourhoods or small town units of 5,000 each to form a moderate town of about 40,000 inhabitants (fig. 2). Such a town unit could, further, be incorporated as a self-contained ward in a town of still larger dimensions. With a 40,000 population it would be possible to provide specialised shops and department stores in the form of a larger shopping centre. There would also be offices, chemmas, theatres, a hotel, a hospital, a larger hbrary, a couple of High Schools, a recreation centre in the form of a swimming pool and sports and games facilities, a

large park, a railway station and a municipal townhall with offices for clvic and administrative needs.

These activities would be grouped and zoned in grouper related areas of the town. So would also a few industrial factory units with due orientation and relationship to the other areas of the town and of transport facilities so that each activity, instead of blundering into or interfering with another, is harmoniously co-related to form the living, healthy organism that should be the town.

# THE LARGE TOWN OR TOWN GROUP

The process could be continued further for a larger de-centralised town group. Five so-called "satellite towns" of about 40,000 people each could be grouped around a central or parent town of slightly greater population of, say, 50,000 The total community for this town group would, therefore, be about 2,50,000 (fig. 3).

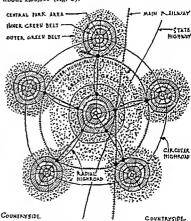


Fig. 3

The large de-centralued town group of 2,50,000. Fire of the medium town units of 40,000 each as unife, 2, we grouped around a parent town of 50,000, with northout and thinting tree in paren belong to introduce town of 50,000, with northout and thinting tree in parent belong to introduce town and countryside. A system of the communications would efficiently the up the various units. In acceptance, we have a system the benefits of urban and rural laving are appreciably brought logither.

The centre would now provide greater amenities in the form of a college, a technical school, a large community auditorium, bigger areas for shops and offices, more and well-sited factories, a market hall, a larger railway station, a small local aerodrome in one of the larger open spaces of a green belt, more hotels, a specialised hospital, an exhibition hall, a small museum and an art gallery, and a recreation and sport centre. There would besides be the usual park on a larger-scale.

The "satellite" towns with their own: individual green belts would be related by means of a larger green belt with the parent town and by green wedges in between their own areas on the outer urban ring and would finally merge into the surrounding countryside.

This then would be our biggest de-centralised town system or unit, with provision for the needs of a population of 2,50,000 people. It will be seen that the great pattern is built up, stage by stage, on an increasing multiple basis, starting originally with the residential unit of 1,000 and arriving at different population groups which at any stage in the process are self-contained and organic. While coherence and unity are the result they are based on a fine flexibility of relationship of varying local centres.

It must be stressed that, while a progressive sequence of development on a diagrammatic basis has been explained, no rigid pattern can be possible in the lay-out of any smaller or larger group. These lay-outs will depend upon and vary with geographical and other individual features of site and circumstances of any particular locality. What must be emphasised, however, are the underlying basic principles by which village and urban planning should be guided and directed. Long term policies based upon such principles would be useful, not only in the creation of new lowns, but in what is perhaps more important, the re-planning and gradual re-construction of all badly built existing ones which are so troical of Indian urban conditions today.

In good planning the provision of areas for plots, roads and open spaces in any town will be based on certain relative proportions. Whether it be the smallest residential unit neighbourhood or the largest town, this relationship will apply, for unless some fundamental principle based on research and experience in this field is used as a guide, no common standard can be possible. The following proportions are considered suitable and lay-outs should be guided on this basis, with of course slight variations or adjustments according to the particular site, conditions and problems:—

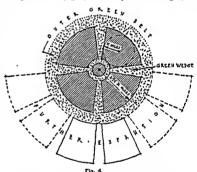
Further, the built-up area should be restricted to one-third the area of a plot if happy results are to be achieved.

The actual skilful relation of these proportions towards the creation of well-conceived, healthy, efficient and happy community units should mainly be left to those best trained technically in this field.

i.e. architects and town-planners. In such schemes will, of course, be necessary the co-operation and co-ordination of all those others actively related, such as the civil engineer, the economist, the sociologist, the lindustrialist, the geologist, the doctor, the lawyer, the educationist, the scientist, the artist and the city father, amongst others, as what is ultimately to be achieved is an organic architectonic environment for the welfare of community groups. Town-planners, and architects with their training in planning can but co-relate these interests and advice and weave them into harmonious, unified and workable patterns for human living.

# THE CITY

From the maximum town group of 2,50,000, we must now go a step further in urban development and cast a glance at the city, the largest unit of civic growth. Working on the same principle as before a town of 2,50,000 could be conceived as a city district unit and cities could be made up of a few such districts, all again related to one another in the complete city pattern by means of green wedges and green belts (fig. 4). The city could be large or



The city. Your large town unit of \$50,000 are grouped around a term of baset, which is miss recent this. Gener wedges like up the units of provide convenient, adequate and readily accessible open sees of the large population of a million popule. A board outer green but prevents sprawing development in the introc and enumes openment wedges and better would read the months openment of the provided of the provided of the provided of the provided of communication. Later expansion would be guided unit by unit on as outer rang as need a size.

small according to the varying number of its district units. It must be realised that, as the total area in a city increases, the distance from the central regions to the fringe of an outer green belt is appreciably increased as well, and that, therefore, green wedges radiating from the heart towards the outer green belt are more useful in providing shorter distances and more easily accessible open spaces to those living farther away from the outer belt.

... On this basis a city could be planned around a central core, with an inner green belt and four main districts divided by green wedges and enclosed by an outer green beit. If further area or expansion is desired, outer district sectors could be provided. increasing in number according to growing need. A carefully planned system of communications, especially along the wedges and belts, would link up the various districts with through traffle arteries and tube railways, while each district with its wards would have its own through arterles and train services with medium and slow traffic roads for local A civic and administrative centre in the core, with the usual other centres for business, recreation and so on, on a larger scale than the town, would be effectively and efficiently grouped to serve the increased needs and importance of the city.

It must be realised that, as In the case of towns so also for the city, the development as outlined above is on a diagrammatic basis helping to stress certain fundamental principles of architectonic environment on a large civic scale, Actual city development, whether original or replanned, will depend on factors characteristic of a particular city. For such planned development, fundamentals, however, must be the guide. An important example of the application to Individual requirements of the principles discussed here is the preliminary master pian for the city of Greater Hyderabad. It has been prepared by the able and technically qualified Director of Town Planning for the State and has been recently approved by H. E. H. the Nizam's Government.

Existing unpianned or badiv planned cities, with very high densities of population in the inner areas, create important problems of population re-distribution in relation to desirable open spaces. One effective solution is to build higher, within reasonable limits, and thus free surrounding areas for open spaces. Instead of housing the people in three to five storey buildings in individual piots, tall blocks of fiats ten storeys high could be erected and so laid out in larger areas that they would be at right angles to traffic roads instead of parallel, with great stretches of open spaces in-between blocks. As can be seen from fig. 5, the results would be a nearly equal number of families housed, hitherto unthoughtof open spaces between structures, greater freedom from traffic noises, less possibility of accidents (especially in the case of children), the disappearance of road parking leaving the route free for easy flow of legitimate traffic, very greatly increased insulation against noise and vision between neighbouring or opposite buildings and consequent privacy, large open spaces for each block forming shady recreation areas for adults and safe playgrounds for children and an over-ali effect of openness and alriness so very essential for building up higher standards of health and efficiency of the citizens

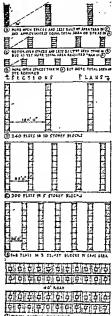


Fig. 5

Building apwards—more open spares, much better living conditions. Flan at "A" shows two average city blocks under typical crowded conditions as entiting, for example, in an Indian city. Traffic roads bound there blocks, while filthy, subsygients service lasses and passages the state of the state of the same blocks and the state of the state of the same being the state of the same being the state of the same being the state of the same being the state of the state being conditions are sent in rection "B", the atmagement would not be conditioned as the same space. In plan "C" with a height of lev stores are the same space. In plan "C" with a height of lev stores are the same space, the same space of the same space of the same space. The same space of the same space of the same space of the same space of the same space of the same space. The same space of the same space of the same space of the same space of the same space of the same space. The same space of the same spac

Many other problems arise, especially in the replanning of our existing cities - problems of legislation and of administration; of land values, land acquirement and apportioning; of means and methods of slum clearance and re-housing for graded social use; dispersal, re-distribution and detailed planning of industrial units with due relation to workers and their amenities - apart from factors of natural resources and communication facilities for raw materials and disposal or distribution of finished products; of a graded and well 'related-network of city traffic; of adequate utilities like water, lighting, power and dralnage; and, amongst others, problems for the provision of the innumerable amenities and activities that form the complex organism that is the modern city.

These are problems whose study and solution fail within co-related technical spheres, vast In themselves, and therefore not possible of even cursory examination within our limits here. Enough, however, has been seen for us to realise that it is highly dangerous, in the Interests of national and civic well-being, to let urban growth drift uncontrolled in the wastes of apathy and ignorance or for the selfish greed of vested interests. The resources of the nation are for the welfare of the community and such welfare can only be possible through intelligent, highly organised, well directed and co-operative planning right blanning and architectonic planning at that

### LOCAL PLANNING MACHINERY

The machinery for urban planning and development will be in the form of local Town and City Planning Commissions. These will indirectly but materially control such planning and growth. They will be technical advisory bodies with non-political or non-party personnel based on qualifications and ability. Their duties will be in the form of local surveys of resources, conditions and physical characteristics, research for local problems, and the formulation and direction of a planning policy visibly and materially expressed in the form of a "master pian" for a particular town or city. Each master plan will be fiexible rather than rigid, so that adjustments or variations in detailed policy could be possible according to later trends and problems arlsing in the course of development through the years. These local master plans will be the basic guiding structure for planned development and no building scheme or individual development can be sanctioned without reference to its implications and effects in the master plan. The local Planning Commission will be the technical authority to advise in this matter.

All planning schemes, recommendations and advice of such a Commission will be duly considered by the administrative body in the form of the Local Board or Municipality and no such proposals or recommendations can be thrown overboard unless by a clear three-fourths majority of votes. Each advisory Commission will therefore actually be an effective force in local development. Its sphere of advisory influence will also extend to any local Improvement Trust schemes as well as work within the local sphere of the state or central Public Works Department. In the course of all such activities It will have to maintain contacts with parallel but higher organisations like its own State Pianning Board and, if need be, through the Board, with its particular Regional Planning Commission which in turn will be influenced in its policies by a Central National Planning Board to co-ordinate the various regional and state pianning programmes. Individual local schemes will therefore have to harmoniously fit into the mosales conceived by the general policies of these larger interests.

The great multitude of villages will have a machinery somewhat parallel to the local level. Each such local Planning Commission will, however, be responsible for a group of four or five villages with a larger village or parent town as the directive centre. Such a Commission would have contacts with the village Panchayais on the one hand and its own State and Regional Planning bodies on the other. Groups of large widely distributed farms could also have a somewhat similar organisation.

#### URBAN AND RURAL RELATIONSHIPS

We have so far considered the village, the town and the city as varying units of community life. In the ultimate National Plan, these must, however, be considered as community units interspersed and significantly inter-related in the vast natural surface of a land sub-continental in extent. In that sense, we should not regard urban and rural areas as separate flelds of activity and planning. Rather must they be considered as complementary, one to the other, in the ultimate pattern of national living, and therefore must be so conceived in national planning. One essential development from such a conception would mean stretches of countryside filtering into the towns and areas of urban growth flowing into the surrounding country. Only then can we begin to have an integral relationship between towns and countryside; and it must be in this spirit that the relation of agriculture and rural life on the one hand and industry and urban activities on the other should be conceived in the larger policies and issues of national planning.

#### THE ARCHITECTONIC SPHERE OF INFLUENCE

The value of the architectonic factor in all planning for human environment cannot be overemphasised. We have but surveyed the subject in outline. It is not possible here to adequately refer to, much less discuss in detail, the architectonic sphere of influence in such wide and manifold activities and fields as, for example, Industry, Trade and Commerce, Transport and Communications for land, sea and air, Housing, Health, Education, Social Welfare, Entertainment, Recreation and Culture. Each is a technical field wide in itself. Research, experience and accumulated knowledge on each is increasing as the world advances. The architect and the town-planner have to acquire the essentials and the principles of such knowledge through the long arduous years of their specialised technical training. It is no wonder then that their worth is being acknowledged and utilised in the Western world where planning activities are now gaining momentum for a new era,

# THE NEED FOR RIGHT PLANNING AND PUBLIC CO-OPERATION

India today cannot afford to fall behind. To get into step and march along the road to national weilbeing and greatness should be her aim and destlny. For this, however, all those who have national interests at heart should first be in a position to understand the true meaning and value of Planning, and especially of Architectonic Planning within the general framework. Further, unless the public cooperates with and helps such planning for its own uitimate good, no planning measures introduced will produce the desired results. For this, the essentials of good taste and aesthetics, the benefits and principles of good environment and of architecture, the responsibilities of citizenship, the fundamentals of nation building on a planned basis and the relationship of architectonic planning to communal and national living-all these must be subtly Interrelated and infused in a re-oriented system of general education for the children and youth of this country. It is only when we tackle these problems at the roots that there will blossom a tree worthily symbolic of the Indian nation

# A SUMMARY

To summarise then:

- For collective human uplift and welfare there must be a plan for human living.
- To achieve the best results planning must be on a large and comprehensive scale with a full measure of co-ordinated and co-operative effort. Therefore, planning must be on national and democratic foundations.
- Planning must be actively related to a physical-moral environment; therefore, it must be conceived on an architectonic basis.
- 4 To be effective, planning must be organised on a graded and inter-related pattern. This will be on national, regional, state and local levels.
- The human environment in such a pattern will be broadly conceived on a balanced relationship of urban and rural living at the higher planes and in more detail when the local level is reached.
- The local pattern will be built up on a cellular organic growth. The smallest residential population group of rural or urban living will be the basic cell or unit and this will multiply in progressive sequence to the community group or small town of 5,000, the medium town

- group of 40,000, the large town of 2,50,000, and the ultimate city of larger areas and population groups.
- 7. The national pattern will be built up at successive ascending planes from the local levels which will now form larger basic units for such growth. The whole will be inter-related on a broadly conceived system of co-ordinated zoning, of self-contained regions and of an effective, graded network of communications.
- 8. Broader conceptions of architectonic environment will be built up of smaller mosales of architectural activity in various individual fields such as industry, housing, health, education and recreation. These will be some of the fields of architectural service where structures and lay-outs will provide the innumerable units for larger patterns.
- For the proper realisation of architectonic planning the services of qualified townplanners and architects must be utilised in co-operation with the representatives of all allied interests
- 10. For planning to be successful there must be a truer understanding of co-related planning and the public should be so educated as to take an intelligent and active share in the tasks to be done.

#### CONCLUSION

With the above summary as a basis we have endeavoured to stress the importance of the architectonic factor in a policy of National Planning. A broad treatment has been sketched so that a general conception of the subject may help towards the awakening and fostering of interest in a vital aspect of Planning. As far as we are aware, this is a sphere new to Indian thought today and in Indian literature In the fleid of Planning. It is, however, receiving Increasing attention in the Western world where countries are faced with the problems of a post-war era. National weil-being and national greatness will depend on the courage and the type of vision that are brought to bear by each country in this field of Planning India, then, cannot afford to lag behind any longer. Let there be for the country, therefore, right planning and right execution of the tasks that He ahead.

# PLANNING COMMUNITY LIFE

# BEHRAM MEHTA

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Dr. Mehla lays done in his forseeing article the fundamental principles of Community Welfare. Community welfare include a co-related plan of Howing Management, Health Unit Work, Mother and Child Unit, Education, extensive Group Social Work to provide recreation for all, Economic Service and Family Gaze Work. The Community Welfare Programme, says Dr. Mehla with reasonal force, can become the most effective weepon in town and villege for the human economication to vital for India. According to him, it should be carried out on a regional basis in well-defined meas forul people trespective of community, class, creed or colour, Incidentilly the community programme provides a unique method of bringing about the assimilation of diverse social groups and gradually creating a single entities pattern for the whole country.

Executive Editor

UMAN communities are the result of social inter-action. They are spontaneously created by the social sense of the people, and by the very needs of life. Human families come together or near each other on account of common interests, and this living together creates homogeneous social units bound together by the iaw of mutual aid, co-operative action, and good neighbouriness. The fundamental social forces that lead to the formation of human groups may be different. Groups may come together for the purpose of skliful and efficient exploitation of the physical environment. Social groups may arise out of blood relationships. Individuals may be brought together by common economic interests and the similarity of the struggle for existence. Whatever be the cause that draws human families together, they become communities as soon as they live in close proximity, with a common regional background. In less organised societies regional communities are constantly broken up by migration. It is a characteristic of the more civilised community that it settles down in a particular region more or less permanently, or at least for several generations, and this permanency becomes the cause of its strength and capacity for efficient social action. The COMMUNITY PLAN is suggested as the best and most effective method of achieving social reconstruction of every section of a settled human group. It means the creation of a special agency for the achievement of human reconstruction. It is an allout effort for rebuilding the human being, and even for vitalising his species. In war-time people get accustomed to the idea of a total war. The Community Plan carries on the same total war against poverty in peace-time.

In India there is a danger of the word "Community" being understood in its "religious sense". In this article this word is used in its scientific sense, meaning "a group of persons or families pursuing their normal vocations of life, and residing in specific areas". As a matter of fact "the regional community occupying definite and well-defined areas" should replace the sectarian communities which are found scattered sometimes over regions hundreds of miles away. These sectarian groups are difficult to deal with or are impossible to be dealt with in a scientific manner by the three weil-known methods of social reconstruction-Individual Case Work, Group Social Work and Community Social Work. Unless human groups are found together, it is not possible to deal with ail the aspects of their life. And piecemeai treatment of each individual and every separate problem of each individual does not result in any substantial improvement in the life of the community.

The Community Pian can be applied to both urban and rural areas, though the methods of approach and details of programmes may be different under different social and physical backgrounds and conditions. The pian endeavours to achieve simultaneously the weifare of each individual, the weifare of each individual, the weifare of each family treated as a unit of the regional community, and the weifare of each regional community treated as a unit of the larger society and the nation

Under the Community Plan, each individual is therefore given a threefold treatment which leads to an intensive care of the community, building the health of its members, and raising its general level of intelligence, standard of life, and cultural level. The problems of the family are tackled most carefully by Family Case Workers. The Community as a whole is developed as a democratic unit where the socialised members of the small social group learn to live a harmonious, peaceful, useful and creative life.

The Community Plan may be demonstrably managed by the local community; but conditions in India are different from those in the West and the absence of intelligent and trained leadership will leave the initiative for a long time to the municipality, public bodies, and authorities providing housing, aided financially by the State and local taxation. In America many of the community plans are initiated and organised by the Church, and even in India temples, mosques and churches may render valuable aid to humanity, provided they remain strictly within their socialty creative spheres.

Community plans will cater to heterogeneous or homogeneous social groups. The former are more difficult to deal with, though the results obtained will achieve the assimilation and unity of groups composed of different racial and religious elements, and perhaps also coming from different economic strata of society In the homogeneous communities the presence of a common economic life should be considered more important, than the practice of a common faith.

In the majorty of cases where the Community Plan is initiated, the community will be already found to occupy a common region—city, district, street or village. But, in certain circumstances, it will be found possible to create new communities by settling selected families in Settlements with planned housing, specially created for them. In the latter case, a systematic selection of families according to certain principles and policies will prove very effective to achieve definite results. Perhaps a municipality will find the Community Plan most useful and effective in reclaimed and rehoused slum-areas. It is not enough to reclaim the slum, it is more essential to reclaim the slum-men.

When the regional community is to be made up of selected families, the presence of a more or less common standard of living proves useful for gradually achieving higher standards for the same group. At the same time anti-social, unhealthy and destitute elements in the community should be weeded out so that they do not hamper the smooth evolution of the Community Plan. It is possible partially to apply the Community Plan to areas and institutions occupied by destitute and handicapped human groups composed of children, beggars, criminally or physically and morally handicapped individuals.

. The Community Welfare Plan is best executed in areas where the people live. The housing problem, which is probably the fundamental problem of human welfare, especially in urban areas, naturally requires primary attention. It is not possible to deal with this fundamental issue in all its important aspects in this article. It is for the town planner, the architect and the engineer to prepare the way for the social worker

to work for the welfare of human groups housed in a healthy physical environment.

The area selected for the execution of the Community Welfare Plan should be a residential area, free from the atmosphere of an industrial or commercial locality. Equipped with a good and wide road lined by trees, electric lights, underground drainage, cheap and speedy public conveyances, adequate water supply, planned houses, playground and public service organizations including a Nursery School, a Primary School, a Health Centre and Dispensary, a Post Office, and a Community Centre, the locality should be a product of modern civilization presenting a simple, planned and attractively built-up physical environment in which the human organism can live in health, grow and perform the functions of life efficiently in peace and security.

The residents in the Community Centre should be guaranteed minimum living space including a living room, a bedroom, a kitchen, a bethroom and closet. Spacy rooms with a minimum floor area of 225 sq. ft. should have adequate window area for light and air.

A well-managed housing area regulres the double blessing of scientific housing management, and a group of tenants pledged to the elementary law of Good Neighbourliness. Ever since Octavia Hill began her good work in the slums of England, the need of a voluntary housing authority to control tenants and tenements has been recognised. The work is done effectively by a small, sympathetic and efficient committee consisting of the local doctor, architect, educationist and some capable social workers alded by a Housing Administration Staff consisting of a superintendent, a manager, and a group of servants. In rural areas, entire village sites should be reconstructed for the proper functioning of the Community Plan. Wherever possible, it will be better to demolish the old sites and create entirely new ones. The planned villages of the Soviet Union present a good example of village sites criss-crossed by small and colourful roads lined by small, clean and, on the whole, cheap constructions. The Interior of the house contains the same fundamental provisions that are planned for a human family. Cattle are housed as decently as human beings whiist barns and storehouses are separately provided to become units of the granary of the nation.

# FUNDAMENTAL PRINCIPLES

The Community Welfare Plan is worked on the four fundamental principles of Co-operation, Democracy, Social Action and Self-help. These four principles lay down a foundation that will hold any social structure for generations. These principles are not unknown to India. They were the foundation of all healthy and happy communities thousand of years ago. Wherever they were replaced by individualism, competition, and totalitarian methods, unhappliess, poverty and exploitation were the results. These great human principles can never be permitted to remain Idle slogans. Each of these words must breathe life and vitality. Each must be

translated into action and everyday life. Each word must enter into the blood and life-force of every ladividual from birth. These words must become the Spirit of the Educational System. These words must express the way of life of our peoples at all times.

Co-operation or Mutual Aid is symbolic of the human heritage. To serve the interest of each through the mutual interest of all is the Irne aim of civilised human groups. This co-operation is the expression of the social outlook and the make-up of the individual mind. This outlook and mind refines human emotions and establishes a new moral code of human behaviour and conduct. It removes all trace of hostility and conflict within the body of the community. It leads to the co-ordination of all efforts and a just and fair division of labour, and gives purposiveness, strength and ability to achieve distinct social reals.

Democracy is a way of living, it does not consist in neurotic actions during political elections. Democracy implies responsible freedom, and whenever this has been achieved, it has meant a voluntary surrender of some part of personal freedom in the interest of common good. At the same time, the small community can more easily and usefully enjoy the freedoms that are merely promised in International Charters and at Conference Tables. Democracy results after a long experience in the art of practical management of society. It results from freedom of thought that is born out of a truly democratic and creative education. It will be there when every Indian child is born and is allowed to grow in an atmosphere of real freedom. It can be there only when woman takes her rightful place as man's equal in the home and society. True Democracy requires intelligence, understanding and tolerance. These virtues are emboded in the practice of the Community Plan.

The dynamics of Social Action can never be realised except when it is practised. The writer of this article has witnessed the meaning of Social Action in a village populated by aborigines when the full labour force in the viliage reconditioned the roofs of all village huts before the coming of the monsoon within a brief perlod of four days. Every man, woman and child worked, worked amongst loud laughter, singing and general merriment. common labour was not paid for. The workers only enjoyed a free and sumptuous meal in the house of each owner when his roof was repaired. Social Action was the main weapon of construction used by the Soviet Union after years of terrible familne and civil war. Social Action alone represents the hidden national energy which can be harnessed for the achievment of social objectives. The Community Plan functions on the basis of Social Action.

Social Action implies Self-help. The individual's steple for existence cannot be carried out on his behalf by another. Self-help is the most powerful weapon of survival. The Community Plan is not meant to substitute self-help by external action. It actually inspires and educates the individual to act

persistently and systematically for his own good. Such action gives character and builds up the morale of the community which is an indespensable asset for the achievement of culture and civilization.

Scientific methods are utilised to plan the activities that are contained in the welfare plan. It is taken for granted that the most efficient social welfare administration implies a direct and personal contact between the welfare agency and the members of the social group. Methodology of the welfare programme includes Individual Case Work, Group Social Work, and Institutional Care. The methods are adjusted to local needs and availability of leadership and finance.

The aim of the Community Welfare Pian is to create and maintain a democratic community of healthy, intelligent, hardworking and efficient citizens who are members of a number of homogeneous families blessed with unity, internal harmony and social and economic security. Iving together as good neighbours in a well-organised, disciplined, productive and cultured society.

The actual functioning of the Community Plan will be spread over many years, probably decades, though the outlook and achievement of the Plan will broadly pass through three distinct stages The first stage, which will be probably the longest and most difficult stage, will systematically plan for the restoration of health and the removal of maladiustments in society and family. The second stage will work for the sustained maintenance of social health and the prevention of decline, deterioration or demoralisation; and the jast stage will consist of systematically planned efforts to improve human and social standards, to assure progress, and to enrich culture and civilisation. A close study of the gigantic social welfare plans in the Soviet Union reveal how the third stage could be reached within twenty years after perhaps the most catastrophic social disorganisation and disintegration known to world history.

## HEALTH SERVICE

Next in importance to Housing, is the physical health of members of a community. The health of women and children is as important as the health of the working population. Even at the beginning of the present century, the health of a community was supposed to be looked after by the physician and the dispensary and the hospital Fortunately, the end of the First World War radically altered the disease outlook. It is now realised that prevention of disease, maintenance of good health and educating the individual to become health-conscious is more fundamental than treating disease after the damage is done. Hence the idea of the Health Centre or the Health Unit. The Health Clinic in the Community Plan becomes more important and useful than the Dispensary.

The aim of the Health Centre is to protect and preserve the health of the community and prevent the

occurrence of disease by care and education. The Health Centre recognises the following to be the chief factors for the protection and preservation of health:

- 1. Good housing, cleanliness and sanitation.
- 2. Proper and adequate nutrition.
- Absence of anxieties, worrses and a disturbed mind.
- Absence of strain on the nervous system.
- A congenial work-life, where labour is performed in healthy conditions.

Housing has already been dealt with.

Nutrition and diet requires proper education for young and old alike. This education is included in the adult education programme, and the officers of the Health Unit will co-operate with schools and employers to bring the knowledge of Health and Hyglene to every member of the community.

The Local Nursery and Primary School will provide balanced diet to children. Special diet will be provided to expectant and anaemic mothers in the Community Kitchen. A special Community Kitchen will provide balanced diet in the community dining hall. The local Co-operative Stores will sell fresh and wholesome articles of food to members of the community.

The Family Case Worker, by assisting and advising the family on all occasions when there is marital disharmony, ill-health, unemployment and economic insecurity, will reduce anxieties and worries to the minimum, thereby indirectly protecting health.

Medical experts and psychologists have realised that modern civilised life, accompanied by a highly complex socio-economic organisation, Is causing a grave strain on the nervous system. The treatment of neurosis in Soviet Russia shows how effective measures can be taken by eliminating the causes that lead to mental conflicts and consequences. A happy, healthy and active youth, a healthy sex life, a balanced family life, normal work-life and adequate opportunities for self-expression in a well-organised society can protect human nerves, and add to human happiness and efficiency.

The Community Welfare Centre, by itself, cannot contribute directly to the material welfare and economic security of workers, but Labour Welfare undertaken scientifically in the coming economic order will bring about the necessary adjustment between the individual and his work life.

The general health of all the members of the Community is preserved by the Physical Welfare Programme of the Health Centre. This programme, which is in the charge of the Physical Director of the Community Welfare Centre, includes playground activities, outdoor life, sports and athletics and various other opportunities provided to spend physical energy, build the body, and give strength, vitality, stamina and capacity for endurance to the physical constitution.

In spite of the maximum attention that is given to the prevention of diseases and the protection of health the Community Welfare Centre has a well-organised Medical Service, attached to the Health Centre. This department is in the hands of a physician, nurses and attendants. Over and above organising and maintaining the local clinic and dispensary, the doctor is in charge of the medical social service of the local school, and he looks after the diet and nourishment of children in the schools, of expectant mothers, and of members of the Community Kitchen An additional lady doctor and gynaecologist may be required to manage the Maternity and Child Welfare Climic.

The medical social service of the Community Centre will not be complete until there is a Psychologist and a Psychiatrist to assist the School, the Health Unit, and to manage the Vocational Guidance Department of the Community Welfare Centre

#### MOTHER AND CHILD WELFARE

A very important duty of any community is the care of the mother and the child. Nature has made the mother the source of all living organisms, and, in the human species, on the health, intelligence, outlook and culture of the women depend the nature and progress of civilisation itself. It is the mother alone who can give that care, training and affection to the child, which can help its growth during the period when it is cultively dependent for maintenance and upbringing on the parents and the family.

It is only during the present century that the real importance of child care has been realised, and the First World War was responsible for the extensive spread of the 'Movement' in Europe. The Movement which began in France, was energetically taken up by England and U. S. A., whilst in Soviet Russia and Austria it has seen its most extensive development. India which has the most appalling infantile death rate, requires the care of the mother and child as the first plank in the plan of social reconstruction. The Maternity and Child Welfare Centre fits ideally into the Community Plan, and If the Community Plan caters to less than five hundred to a thousand families, a Maternity and Child Welfare Centre can be provided to serve more than one Community Centre In the same region.

The Maternity and Child Welfare Clinic will be staffed by a lady gynaecologist, a part-time dentist, a trained nurse, a health visitor for every 400 families, and servants. Over and above the spaclous Community Hall in the Community Centre, the Clinic will have its own lecture and demonstration room, examination room, kitchen, dining room and milk service depot.

The patient attends the Clinic in the 16th week of pregnancy, unless previous birth history suggests earlier attendance. A complete physical examination precedes any treatment, and regular case history sheets are maintained for permanent reference. The mother is given dental treatment, urine is examined, blood pressure is taken, pelvic measurement

is recorded and the Wasserman reaction is ascertained.

Routine examinations are given in the 24th and 28th weeks, and then the mother attends the Clinic fortnightly till the 36th week, and week! till the time of delivery.

During the anti-natal period the Health Visitor will visit the mother at home, study home conditions, and see that the advice given by the gynaecologist is carried out. Special care will be taken about the physical environment, the general health, nourlshment and exercises of the mother, and care is taken that family conditions and work-life do not cause any worry and anxiety to the mother. The woman delivers at a municipal hospital which is visited regularly by the Health Visitor. The Clinic gynaecologist is given full case history by the hospital, After returning from hospital, both the mother and child attend the Maternity and Child Welfare Centre for advice, treatment and education. During this postnatal period, the health and nourishment of the mother becomes the first care of the Cilnic, whilst the child begins to grow under the Clinic's supervision. Every child receives at least a pint of fresh milk per day. Its diet is further supplemented by codliver oil and calcium. Ultra-Violet treatment is given whenever necessary.

The education of the mother is very important. Whilst general education is given to all women in the Community Centre's Women's Club, special education is given through leaflets. Instructions and advice. Education about the care, lactation, diet and clothing of the child, instructions about treatments of minor aliments, and advice about Family-Planning, Birth Control and Spacing are most important for every mother. Anaemia and debility are especially treated, and whenever necessary the mother is given free meals containing balanced diet by the Clinic Kitchen.

#### EDUCATION

In the world of tomorrow education will be democratised. The principle of democratic education. implying the right of equality of opportunity, was also evident when some citles in India attempted to make primary education free and compulsory. But, in India, maximum importance has always been given to higher education, to the great detriment and neglect of the real foundation of education, Progress in psychology made the educationists realise that fundamental education was required in the early years of the child, and this education was not a mere training of the mind, but it required attention to several important factors the neglect of which in the early years left handicaps in the life of individuals. Some important Items require imperative attention from the earliest years of the child; they are:

 The physical environment of the child must be proper, healthy, happy, helpful, harmonious and beautiful.

- Nourishment assures the full growth of the human body, accompanied by rest and sleep after activity.
- Good health must be maintained, and all ailments of the child require immediate treatment
- The emotional life of the child is enriched by the affection it receives from the human environment.
- The child requires careful training in the early years, including the training of the senses and skill leading to the proper development of intelligence, and the training of right habits.
- Play and activity are fundamental occupations of childhood and they should form part of the life of any child.
- The child must be socialised from its early years and, therefore, it requires opportunities for companionship and participation in social life.

In India, the poverty and ignorance of the masses cannot permit the achievement of these important seven objects for many years. It is, therefore, the duty of the State, in co-operation with society, to take fundamental measures which alone can create a population of quality to achieve the ideals and aims of Indian civilisation. It can be stated with emphasis that unless our children receive these imperative opportunities for a better life, other plans of reconstruction can never succeed to yield results of a permanent character.

The Community Plan in each area must prodid a Nursery School for children between 2½ and 5 years, and a Primary School for children between 6 and 10 years. A well-planned and efficiently equipped school building, with its properly equipped playground and garden, well-manned by a staff of trained young teachers, must be provided as a part of the Community Plan.

The school building for the Nirsery School requires large halls because a long siesta requires space for children to lie down after lunch. An aggregate area of 30 sq. ft. per child is imperative for the school of tomorrow. Over and above the class-rooms and work-rooms, the Nursery School must have its Assembly Room, Dning Hall, Kitchen and Toddler's Reading Room. The physical environment must be homely, bright, happy, attractive and interesting for the child.

The Nursery School requires a new type of teacher and a proper staff. Young girls trained specially in psychology and modern methods of teaching, capable of becoming affectionate, playful and helpful companions of the child, dealing with their many problems tactfully, are necessary to give the child security and training. The staff must also include a psychiatrist, nurses, cooks and attendants.

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The most important aspects of the young child's life are health and growth. Every Nursery School In the country should be able to provide wholesome and balanced diet to children, prepared under medical direction and supervision. Adequate milk and supplementary foods like codilive roll, calcium and honey etc., should be provided to correct deficiencies. Adequate rest and sleep are necessary for the promotion of the child's health.

The child should spend several hours every day outdoors in a playground equipped with sand pits, wading pools, swings, sea-saws, Jungle limbs, slides and similar playground equipments Sun-bathing and shower boths also add to their health. Besides, an extensive outdoor life must supplement the games and play-programme of the school.

The School Social Service must provide for the care of health, medical examination, maintenance of physical and mental growth records, and immediate treatment for all aliments.

The principle of activity will dominate the training of the child. Whilst India has to learn a good deal from the methods of teaching evolved by Froebol, Montessori, Miss Macmilan and others, it is imperative that large scale experiments should be carried on in specially created experimental stations and institutions to evolve methods suitable for Indian children and conditions. Indian nursery schools, whilst continuing the already too well-known programmes of all nursery schools, will continue to make necessary changes and improvements in the light of experiments performed in experimental institutions.

It is necessary that primary education for children between fits and "gith years is provided within a distance of not more than half a mile from the residence of the child. Therefore, it is profitable to have a primary school as a part of the Community Plan. When primary education is free and compulsory, a small school may become necessary for each unit of 500 families. It is not proposed to go into the details of this most important problem of our country, because it properly falls within the scope of Education. It is only sufficient to state that Primary Education is the foundation of school education, and as such it must be completely revolutionised to suit the requirements of the future progress of India.

One of the most important advantages of the Community Welfare Plan Is the opportunity that it offers for creating a democrade Youth Movement that will give training to the young in leadership, eltzenship and organisation and administration work, and at the same time provide them with opportunities to engage their interests in the manifold youth activities that help them to become energetic, useful and efficient eliziens of tomogrow.

Children and youth are primarily engaged in educational activities in schools, coleges and workshops. The Community Welfare Centre provides opportunities for activities outside school hours, through its youth welfare organisation. The Community Welfare Centre has to bear the major burden of these activities as long

as educational institutions do not provide extra-curricular activities for their pupils.

Youth Welfare activities are provided by the Community Centre in three separate sections for juniors, adolescents and young persons. Each section is provided with activities under five major headings:

- Physical welfare and recreation;
  - 2. Outdoor life and Nature study;
- 3. Vocational activities, handicrafts and hobbles;
- 4. Intellectual pursuits;
- 5. Participation in social life.

The Junior Section is organised for the benefit of children of both sexes between the ages of seven and twelve years. The Play Centre acts as the basic activity for these children, giving them the opportunity to play organised games every evening according to their age and sex interests. Indoor games are provided as supplementary recreation.

Groups of boys and girls affiliated to the National Scout Movement in India which is named the Hindusthan Scout Association can provide excellent training to our younger generation. Excursions, camps, hikes and tramps will create in the young that love for Nature that will give them health and add to their strength and vitality. The various pursuits for Badges interest the young in various hobbies and contribute towards the awakening of interest in various handicrafts and scientific subjects.

The Junior Section is provided with special facilities in the Community Centre in the Hobbies Club—democratically organised by the children themseives. Such a club equipped with small workshop tools for carpentry, fretwork, wood-turning, and other wood-working and plastic-working machines, mecanos, materials for drawing and painting and plasticine for clay modelling. Special equipment is provided for activities suitable for girls.

Small children of the Junior Section are looked after by young instructors who give them games and rhythmic exercises, teach them dancing, singing and music, and occupy them in hand-work with paper, cardboard and wood, clay, paint and brush.

The adolescent and young persons have a more elaborate and ambitious programme of activities. They themselves run a well-organised play centre which is equipped with playgrounds and playground equipment. They play group games, team games and indoor games.

The Community Welfare Centre may have a well-equipped gymnasum and the youth of the comminity will practice for athletic events under trained instructors. The members of the Centre, beyond participating in provincial and national sports, will have their own Annual Athletic Sports in which all persons, children, young and old, will participate. Each Centre will become a training ground and preparation field for athletes.

Nature Clubs are hardly found to exist in Indian cities and the city youths enjoy recreations that are of poor cultural value. A love for Nature must be encouraged in the young from early years. Nature is a pleasant companion and a useful teacher. Life in the open air gives health, strength and energy. The Nature Club is organised for persons over twelve The programme includes hikes, tramps, mountaineering and camping. Gradually members interest themselves in Nature study, study of animals, birds, plants, rocks and soil. When Nature permeates the life of the individual, he begins to live according to Nature's laws and becomes a healthy, useful, and efficient citizen. The Community Centre, through the Nature Club, will provide opportunities for swimming. cycling and other outdoor activities that attract the attention and enthusiasm of the young.

The Community Centre undertakes a very ambitions programme for preparing the young for work life and family He. The Community Centre organises work-shops, laboratories and libraries for the young. Equipment and instructions are provided for haudicrafts and study circles.

The youth programme of the Community Centre provides a healthy and active social life to the young. They organise socials, musical evenings and Art Circles, and plan ambitious programmes for celebrating holidays and festivals.

The Community Welfare Centre lays an emphasis on the programme for the young; but it does not fall to provide a suitable programme of recreation and education for adults. The adult members democratically conduct Clubs which plan interesting and helpful programmes for all members. Groups of men and women meet separately as well as together according to the contents of various programmes, and the suitability of time for activities. Recreation is especially needed for working adults. They enjoy both indoor and outdoor games, socials, musical evenines and entertainments.

Study Circles are conducted on subjects dealing with regard to the education of their children. Child psychology proves an interesting subject for parents of all classes. Lessons on child care, sex life and family planning are necessary for both men and women. A knowledge of domestic economy helps the family to organise the household on the basis of the family income. Lecture programmes and debates are as interesting for adults as they are for the young when the adult population forms intellectual habits.

Members of the Women's Glub receive practical guidance in training in vocational classes on cooking, cutting and tailoring, laundry work, embroidery and fancy work, leather work, spinning and weaving, and innumerable other arts and crafts which not only add to the family income, but contribute towards the culture of the regional group.

The Education Director of the Community Welfare Centre is responsible for organising independent and well-planned projects in Adult Education. A programme of universal literacy will be essential in the early stages till there are adults left who somehow failed to receive the blessings of literacy. Additional classes are necessary for the literate who have further intellectual ambitions, Night classes and extension courses in history, economics, politics, psychology and other sciences useful to society interest small groups of adults of both sexes. News lectures and discussions on world news appeal to large numbers.

A Community Reading Room and Library, organised by the Education Director, is indispensable for keeping alive the intellectual life of the Community. Newspapers, magazines, fiction, poetry and scientific literature are provided according to the needs of the Community. Wall newspapers and local bulletins help the Jocal population to express their ideas and problems for the benefit of the general public. A circulating library provides intellectual recreation to young and old alike.

The modern Community Centre has the advantage of using up-to-date equipment for the spread of education and culture. Each Community Centre has its own Visual Education Service. The Service takes advantage of the Film Library organised in each city.

# ECONOMIC SERVICE AND FAMILY CASE WORK

The happiness of the family depends fundamentally upon its economic well-being. The work-life of individuals is looked after by the State and the employer The Community Welfare Centre, however, is called upon to shoulder equal responsibilities. The four essential services rendered by the Community Centre are:

- Care of the unemployed and treatment of the unemployment problem.
- Planning Home Industries and finding sources for supplementing the family income.
- 3. Organising Co-operatives and Thrift Schemes.
- 4 Preparing the young for employment and organising the teaching of arts and crafts.

The Community Welfare Centre manages the local Employment Exchange and maintains contact with business and industry. The Superintendent of the Employment Bureau maintains proper records, and aid is given to the unemployed in his search for jobs. Financial assistance is obtained for the unemployed and his morale and character are maintained. Measures are taken for preventing deterioration of skill and work ability. Welfare activities provide adequate recreation to prevent demoralisation and lapse into social vices.

Activity of the Boys' Club, Girls' Club and the Youth Welfare programme lead to the creation of Home Industries and a local workhouse which will supplement the income of earners, especially by providing work to women and young persons. The Aris and Crafts selected for local encouragement will depend on a study of the local demand and market.

Any Community will be benefitted by the local Consumers' Co-operative Society that will eliminate the middlemen, sell goods of quality at reasonable rates, and save the consumer's time spent on shopping at distint markets. A Co-operative Credit Society may prove equally helpful. The Community Welfare Centre can organise a Health Insurance Scheme and an Unemployment Insurance Scheme which will prove of great benefit to the local inhabitants

The Director of the Community Welfare Centre conducts a Vocational Guidance Bureau for guiding young men into suitable jobs and services. Industrial and practical classes are conducted to give vocational training in business, arts and crafts to different types of people.

One of the most essential services rendered by a Community Weifare Centre is the organisation of Family Case Work to help the smooth and normal functioning of family life. Given a proper physical environment, a secure work-life and ability to educate the children, it should be possible for families to live in happiness and comfort. Problems, however, are bound to arise which may for the time being disturb this happiness and normal life of the family. These disturbances in the normal life of the people are adjustable by trained social workers who act as Family Case Workers By their perpetual contact with families through the Community Welfare Centre, these Case Workers win over the friendship of the local communities and go to their assistance when they are called upon to do so. The Case Workers follow scientific methods of diagnosis and treatment, and by a persistent follow-up they see to it that major family problems are resolved without injuring the organic unity and purpose of family life.

The entire functioning of the Community Welfare Programme is meant to create a healthy, efficient, co-operative, democratic community. After several years of experimental existence, the Community will gradually become a democratic unit, managing its own affairs, and taking measures to safeguard its own happiness, health and well-being. It will elect a democratic organisation to manage not only the Community Welfare Centre, but to look after the entire life of society, as well-organised communities used to do in the past. Once the essential unity of a regional community is realised, and the members therein find that strength which is the most important result of this unity, the society will begin to live a happy and creative life, functioning on the fundamental basis of Good Neighbouriness and Mutual Aid The organised Community will soive all local problems and enforce ordered social living by arbitration. It will plan a full and active life for its members, with many festivais and celebrations, expressing the culture of the human group which will be added to the achievements and culture of many such groups, and thus enrich the nation and ensure its cultural progress among the civilised nations of the world.

# INFANT AND CHILD CARE

K. H. CAMA

Dr. Miss Katayun H. Cama, M.L., M.Sc., Ph.D. (Mich.), was lecturer in Child Psychology, and Psychologist in the Child Guidance Clink at the Tata Institute of School Science. She is the first Woman Magistrate appointed under the Bomboy Presidency Children's Act. Dr. Cama studied Child Psychology, Linguistics and Education in the Michigan University of the United States

Prietly and yet comprehensively, Dr. Miss Cama here deals with the entire problem of Child Welfare in India. She impressively demands an entirely new outlook on the importance and status of the child in Society. Her insistence is on the proper understanding of the child's problems as a complex human mechanism and as a product of diverse environments and circumstances. She believes that u comprehensive and scientific child wetlare programme can only come from a Government succeepy interested in the welfare of the child as the first asset of the unition. The relative importance and details of scientific approaches to fundamental issues like pre-natal care, home care, health, education and vervation are obly pointed outly her. With her training and experience, she deals authoritative with the problem of destitutes and delinquent children and pleads for their rehabilitation so that (Way may be reased to become normal and weefst dileum of the State.

N this land of eternal paradoxes where fabulous wealth and stark poverty, vast stores of knowledge and abysmal ignorance, treasures of wisdom and fossilised accretions of superstition co-exist, the problem of the child is the most paradoxical of all. It might be said without the slightest exaggeration that there is hardly any country in the world where the child is more pampered, more spoilt, more over-protected and over-indulged on the one hand and, on the other, more neglected, more rejected, more Ionely, lost, unprotected, victimised, exploited and thrown at the mercy of the The task of future planning and reconstruction, therefore, in the midst of such unparalleled contradictions becomes all the more complex and challenging.

But before we proceed with a consideration of the various aspects of the problem of the child in India, it will be well for us to correct our narrow views regarding child upbringing, child welfare, child proceeding child education, child health, child conservation and child rehabilitation in the light of the tremendously broadened present-day concepts and scientific outlook. It is most important for us to realise that the child is not merely a play-thing, or a slave, or a creature to be proud of and shown off to others, or clay to be moulded according to our own fancies and whims or a peg on which to hang our own hopes, fears, joys, frustrations and sorrows, but an Individual In his own right, living, growing developing, emerging and evolving with the physio-

logical and psychological forces within himself and with the interaction of these forces with socioeconomic forces of the external world around him. This complex little individual called a child has its own needs, desires, urges and drives, and a proper understanding of and assistance in the reasonable satisfaction of these should form the basis of any programme or scheme of future reconstruction. It is only too painfully obvious that in the home, school or community life of the child in India at present, hardly any attention is given to the physical, emotional, mental or spiritual needs of the child, apart from the formal schooling, physical exercise and some religious knowledge for some city children and entire absence of it in most village chiidren.

It is superfluous to say that in any nation-building activity the child is the first and foremost consideration as he is the starting point of all that affects the prosperity, wealth and power of a nation. How then shall we so plan ahead as to secure the maximum social, psychological and physical benefits and emotional and economic security for the child in India? Obviously, we shall have to start from the prenatal period and birth and proceed through in-fancy to adolescence. But, before dealing with the child proper, it will be necessary to assume that we have a government in India which is interested in children and their weifare and which is most anxious to solve the social and economic problems that affect the weifare of children and you him all its aspects

and to give the guidance and assistance required to assure security, protection and opportunity. The White House Conference on Children in a Democracy formulates a practical approach to child care and protection when it asserts:

"Concern for the child begins before his birth in concern for his parents; it continues until the child reaches maturity. During this period of childhood, roughly 20 years, it is possible to distinguish certain needs of the child as an individual and other needs which are identical with those of his family or his community. The child receives, or should receive, services from many individuals, groups, and agencies in addition to his own family. Each has its special task; none can be performed successfully without regard for the others However, the best intentions of one group have often been nullified by ignorance of the work of another, or by the interference or mefficiency of others. Too often people have failed to recognise the simple truth that the child cannot be broken up into parts - one for the parent, another for the teacher, one for the public official, another for the playground and still another for the church The child is an indivisible whole as he grows from infancy to manhood and must be planned for and served as such" >

The first essential then in planning for the child in India is always, and at every time, to keep the child as a whole in the forefront while dealing with any particular aspect

#### PRE-NATAL CARC

Beginning with the moment of conception every child should have adequate preparation for his birth, his mother receiving pre-natal, natal and post-natal care, and such protective measures should be adopted as will make child-bearing safer To achieve these ends all women - whether urban or rural - during maternity and all newborn infants should have complete maternity care through private resources or public funds or Government ald. Such service will involve care of the mother throughout pregnancy and at delivery by a qualified physician aided by a fully trabled and experienced nurse or midwlfe as well as hospital care and facilities for care of emergency and complicated cases and of the mother in the home, hospital, clinic or village health centre. There should be adequate provision of medical social service in the cities and viliages of India so as to ensure good supervision of nutrition of the nursing mother and of the care of the newborn Infant. Infant mortality statistics in India are too well-known to need mention here. Suffice it to say that unless these measures are fostered, provided for and enforced by Government, India will continue to have the highest Infant mortality rate and this will undermine every effort at planning in every other direction as the child is the starting point of any well-rounded and

well-balanced scheme of reconstruction. Therefore, the first birth-right of the child in India should be full pre-natal natal and post-natal care.

#### HOME ENVIRONMENT '

The second essential for the child in India is a home. Every child in India should have a dwelling place which is safe, sanitary and wholesome, and a home environment that is harmonious, full of love, sympathy and understanding and conducive to the proper growth and development of the child's personality. In India, where millions sleep and live in the open and have not known what It is to have a home, and where the vast majority of children live and sleep on the footpaths and streets and roadsides, such a notion as a home for every child may seem fabulous, but it must be remembered that no planned social reconstruction can be achieved or even contemplated if this fundamental need of the child goes unbreded and is not given due consideration In other countries those responsible for social planning ask the questions, "What sort of houses do the children live in" What sort of houses should they have?' In India the question to be asked is "Do all the children have a home at all " It is obvious that for the urban and rural population the problem of housing is a serious, difficult and urgent one. Although the special concern of this contribution is the relationship of housing to child welfare, housing is a matter which can be discussed best in terms of the family. The housing of the family is the housing of the child and housing does have a very special significance for the child because the younger the child the more susceptible he is to environmental influences, as the pre-school child spends more time in and around the house than any other member of the family except the mother,

It will be necessary, therefore, in the future to spend a large part of the wealth of the country on a nation-wide project of housing. The Central, Provincial, Civic and Rural Governments should provide grants and loans to local housing authorities for slum clearance and construction of new homes and public housing and this should be done through legislative enactment by Central, Provincial, Municipal and Rural or District Governments. Special attention should be given to rural areas where the majority of the nation's children live, and housing programmes for rural areas should be adapted to rural conditions peculiar to each district. The words 'home', 'family' and 'children' are often used Interchangeably, and It should be so, because a dwelling becomes a real home when the family and children breathe life into it. The character of a dwelling is important to every member of the family, but more so to children. It is, therefore, necessary that the design, construction and surroundings of a family dwelling be developed with adequate reference to children's needs. The dwelling or home should afford shelter against the elements, should have sunlight and air and should be safeguarded against fire, impure water and improper disposal of sewage and garbage. The present-day system of housing, where three or

<sup>&</sup>quot; General Report adopted by the Conference, 1940.

four families totalling 15 to 20 persons including men, women and children reside in a single, dark, dingy little room should be entirely abolished by legal enactment in overcrowded slums of large cities in India and this should be followed up by careful supervision and inspection. It must be noted here that a suitable dwelling place is not merely a matter of design and structure but also of the character of the immediate surroundings and of planning of whole neighbourhoods for mutual protection and advantage and for freedom from trnffic hazards and other dangers and demoralizing influences. It must also be remembered that taking the child as a whole in the larger whole of the family, the child needs, apart from the physical factors of a dwelling place, the personal and human elements of a home and that care, affection, attention, love, understanding and freedom for development of his personality which a home provides and which is his most precious birth-right.

#### HEALTH

And this leads us to another fundamentally significant essential in a child's life and that is health. Every child in India should have regular. complete and thorough periodical physical examination, care of specialists and hospital treatment as well as protective and preventive measures against communicable diseases and the ensuring of pure food, pure milk and pure water with the ald of scientific experts in the planning of diet and nutrition. To achieve these ends preventive and curative health services and medical care should be made available to the entire population, rural and urban, in all parts of India. This will require the creation of full-time local health scrvices organised on a city, district or village basis together with the establishment and adequate support of health centres and hospitals as needed especially in rural areas. Medical care for sick children in home, clinic or village health centre and facilities for expert diagnosis and treatment by pediatricians in appropriately organized diagnostic and treatment clinics with professionally trained medical social service staff should be recognised as the minimum essentials in any public health service programme. In India, where so much ignorance and superstition need to be encountered, a nation-wide programme of education to enlighten the public in all aspects of health and medical services for mothers and children is a fundamental necessity. In our medical colleges, special provision should be made for the training of personnel to develop and carry on a maternal and child health programme as a major activity. Particular training should also be given to 'Health Visitors' to prepare them for work in remote rural areas.

In recognition of the fundamental importance of untition to the health of children, a national nutrition committee composed of dieticians, nutrition experts, scientists, physicians, economists, agricultural experts and consumers' representatives should be appointed to review and co-ordinate various efforts for improvement of nutrition in the country and point the way to a nation-wide policy in this field.

In India, where the vast majority of children are ill-clothed or almost naked, ill-housed or entirely homeless and ill-fed or perish by thousands owing to starvation, such a scheme may appear to be visionary and unrealistic. But it must be realised that any neglect or curtailment of measures for the essential protection of child's health is inconsistent. with maximum efficiency in a nation-building plan of social reconstruction. We need refer to the facts. and figures in our present-day public health system in India to realize the inadequacy and paucity of efforts in this direction, "There are" says Dr. A. C. Ukil, "600,000 villages in India and if we have tosupply a qualified doctor with public health qualifications to a group of, say, three villages, we shall require 200,000 trained physicians to man the peripheral units of the rural medical relief on public health organization. Besides, we need better trained workers for the purpose of supervision or for supplying service which requires specialized knowledge and skill. Assuming that 10% of the total personnel would be engaged in supervision work, we need 20,000 supervisors. Besides. specialized service may require another 10,000 highly skilled doctors. This means that if we are to reconstruct public health on a new basis, we should require at least 230,000 trained doctors of different categories. As a result of scientific medical training in India for the last 100 years the number of qualified practitioners is today only 42,000. If we have to go on at this rate it will take us another 150 years to get the required number".\*

But this is not all. In the whole of British India there are only about 146 whole-time officers holding a Public Health Diploma. In the maternity and child welfare field the same dismal story confronts us. The maternity and child welfare bureau of the Red Cross Society maintains seven schools for training female Health Visitors and about 60 or 70 come out of these schools every year. What a mockery of health service in a country with a population of 400,000,000 As for Maternity and Infant Welfare Centres, there are 800 of them in India, but many of them, as Sir John Megaw points out, are hardly worth the name. It has never been more imperative than now to develop a mobile and flexible public health service in India But where, it might beargued, are the funds for such a gigantic scheme of public Health Service to come from? If India could manage to spend several millions a day now to meet the military needs of the present war and if crores of rupees could be collected for War purposes and lacs for Kasturba Fund, it should not be too visionary or impossible to mobilize the necessary finance. for national planning in peace-time if there is a keen desire and a policy in the government and public to pursue a bold programme. It is absolutely necessary then that every child in India should have proper medical, public health and nutritional careif he is to grow up into a strong, virile, heaithy normal citizen with a sound mind and sound body.

Proceedings of the 25th Indian Science Congress: Part II, Presidential Address, 1941, p. 270.

#### EDUCATION

Education, in the real sense of the unfoldment of the child's creative ability and growth of personality as a whole, is another of the undisputed birthrights of every child in India. Education begins at home where the child learns to speak, to walk and to handle things, to play, to demand, to give, to share and to experiment. It is in the home that the foundations of self-reliance, self-respect, co-operative living, mutual aid, reflective thinking, initiative, drive, love for truth and scientific accuracy and other qualifications of character and personality are laid. As the child grows older, nursery schools and kindergartens suited to Indian needs and conditions should be established in every city, district and village of India to supplement home care. These nursery schools should be started for children from 2 to 5 years of age and the primary purpose should be to provide for the physical welfare and wholesome mental development of young children entrusted to their care. Frequent medical examinations, nutritious and well-balanced meals, sufficient quantity of pure milk, a free and wholesome environment favourable to the bodily growth and a programme of activities suited to the needs and personality deveiopment of the child should be insisted upon. The obligation of the nursery school should not end with the hours spent at the school as much of the advantage gained by attending the nursery school will be lost unless its principles can be carried over into the remainder of the child's life. Hence the nursery school teacher should have a sympathetic acquaintance with the child's parents and understand his home background and community and neighbourhood environemnt. By frequent visits and informal contacts with the parents, the teacher not only is able to study the home factors underlying the child's behaviour but can also raise the standard of care and training in the home. Modern psychologists and psychiatrists are unanimous in their opinion that the pre-school period from infancy onwards is the most important period of a child's life It must therefore be realised that the upbringing of a child can only be happy and successful If the mother and father co-operate with each other and with the nursery school teacher on the methods to be used.

In India where education is neither free nor compulsory nor universal, and where the major bulk of the population is iillterate, there is tremendous or almost unlimited scope for national planning and national reconstruction through the co-ordination of educational institutions and social work agencies.

In the U.S.A., about 150,000 one-room rural schools are still in use, constituting approximately three-fifths of all public school buildings and many thousands of the farm children are enrolled in 1800 consolidated and 20,000 two-room schools Among the 200,000 high-school teachers, about 15,000 are employed in small rural and viliage high schools. No comparable statistics can be shown for rural education in India as we are only as yet talking about planning a nation-wide scheme of universal, free, compulsory education. What we need at this critical

period in the nation's awakening is a well-thought out, well-planned, well-innanced and well-organized scheme of educational reconstruction under trained leadership. For, not only are we confronted with the problem of illteracy among the masses but with the problem of prevention of juvenile delinquency and destitution which is an exceedingly accute one today. What are our educational institutions doing for the care of the nervous, emotionally unstable, unadjusted and delinquent children? The answer is practically nothing.

By now it has become quite clear then that education cannot afford to remain static and formal any longer; that it can no longer be subject-centred and deal merely with mechanically drilling the child to read text-books and pass examinations; and that it should be child-centred and deal with the individual as a whole. For, education does not mean the passive absorption and reproduction of text-book material but is a dynamic process of unfoldment and adjustment of the child, a whole within the larger whole of the society. Viewed in this light, education becomes the process by which the child learns the difficult art of adjusting his desires to his environment and the School becomes the social organ to assist in the process. Thus, the school subjects are not the end but the instruments which develop the necessary knowledge or skill by means of which the growth in the child's capacity and abilities is made possible, and educational method becomes the technique by which the instructional time is actively and effectively employed to aid the child in the development of his personality. All this points to the necessity for a type of education for life which will enable the child to develop a realistic and creative attitude towards modern existence, and for a type of mental hygiene programme which will enable the Individual to battle with life's situations successfully

Accordingly, the scope and nature of the entire school curriculum and methods of instruction will have to be completely altered and reorganized and will have to be conceived as a continuous development through the nursery, the elementary and secondary periods, with experiences of children grouped around major functions of socio-economic life, such as agraculture, industry, protection and conservation of life; property and natural resources; production, distribution and consumption of goods and services relating thereto; communication and transportation of goods and people; recreation; expression of aesthetic impulses; exploration; extension of freedom and integration of personality.

To achieve these ends, in every school in India, attention should be given to the interests, needs, experiences, abilities and activities of child's life. The traditional narrow grouping of instructional material into subject-matter should be replaced by broader units of activity closely related to the child's life and the activity programme must be sufficiently within the range of the child's accomplishment and should be varied so as to permit the child's all-round development. It should furnish opportunities for many

kinds of endeavour and provide for social contacts leading to the development of skills and abilities. Such an activity programme should further be aimed at developing those qualities of character which are of social and moral significance in our modern society, such as reasoned conformity instead of blind obedience; fair and honest dealing instead of expioitation; investigation instead of thoughtiess acceptance; open-mindedness instead of prejudice; promotion of the common good instead of selfish advancement; and intelligent assimilation of all that is best in the various cultures of the different nations of the world instead of wishful thinking and basking in the past giories of a culture that is no more. If the task of mass education is to be started in right earnest, social sciences should form the core of the curriculum and the social worker should be sent to every village and every mili, factory or industrial concern. These trained social workers should not only teach the illiterates to read and write but should educate them in matters of health, disease, nutrition, housing and recreation and should be able to deal intelligently with problems of child labour, delinquency and handlcapped children and with community problems and welfare organizations. Every school in India should also be provided with a child guldance clinic and psychiatric social service. This suggestion may not seem practicable as there are hardly any psychiatrists in India beyond a handful of them to supply the needs of all the proposed schools. Moreover, the applications of the psychiatrist would need to be made by the class-room teacher who is himself (or herself) ignorant of the subject-and a litte psychiatry is a most dangerous thing. However, if as suggested in the public health and medical programme in India, a nation-wide scheme for the training of teachers, social workers, psychiatrists, psychiatric social workers, visiting teachers, occupational therapists and vocational guidance experts is iaunched, the possibility of providing this vital service for the emotionally unstable and mentally retarded chlid may not seem very remote. For, it is imperative that some people with scientific social training be apprenticed to the schools. Such technical assistance by a trained personnel would not only aid effectively in handling misfits on an individual personal basis and make the schools better qualified agencies in the development of a sound and wholesome personality but would also better the number of the educated unemployed,

#### RECREATION

Not the least important of the child's needs is wholesome recreation. Recreative physical activities for children and adolescents in the schools, home and community environment both in the villages and cities of India should be provided so that the child may spend his leisure hours in happy association with his fellows by taking active part in well directed properly organized indoor and outdoor games and thus reap the advantage of maintaining physical fitness and sound health. To achieve this objective the training of leaders on an all-India basis is most esential. For leadership is the foundation on which

physical recreation rests and wise leadership, although recreative in character, is educational in effect. Therefore, if the true aim of physical education is to be carried out, the leader's influence should be progressive, constructive and inspiring so that each child is encouraged to become self-reliant and balanced and to acquire a sense of values, endurance, stability, enthusiasm and power of stimulation and tact in a spirit of keen competition.

It is encouraging to note that India is gradually becoming interested in this field of endeavour and some feeble beginnings have already been made, but those are private, individual or provincial in character and have not been tackied at all on a well co-ordinated nation-wide scale, Physical training schools and coileges should be established in every city of India and these should train teachers not only for work in educational institutions but also for work in local community and rural organizations. The courses should provide for training of men and women to become efficient leaders of physical activities in voluntary organizations such as kiddy clubs, boys and giris clubs, hobby clubs, scouting, guiding, children's book clubs, children's libraries, recreational gymnastics, national dancing, skipping, swimming, athletic sports, boxing, dramatic clubs, camping, hiking, community singing, and getting together on colourful festival days. For these activities the provision of playing fields, gymnasia, playgrounds, swimming pools and recreational centres and auditoriums is one of the main considerations in national planning.

Psychologists today are of the opinion that the aesthetic satisfaction of the child must be catered for If the schools are to produce that harmonious and well balanced personality which is the dream of every parent, educationist and administrator. All types of physical activities should aid that harmony of body, mind and spirit which is the measure of maturity, and emotional and mental stability. Rhythm seems to be an inborn trait of almost every child in India, whether he he the sophisticated weii-looked-after child or the street urchin or the tiny village tot. This rythm which is the normal possession of the very young should be encouraged in every form of physical activity. The babe-in-arms expresses its joy and wonder in rhythmic movement, and the spontaneous co-ordination of movement in the simple musical forms begins fong before a child is capable of benefitting from any direct method of physical instruction. So, following the line of the child's own development, the nursery school should provide the fullest possible scope for this innate power of expressing joy, which is the mainspring of vitality and growth. The dancing in the nursery school and kindergarten, if allowed to take its natural course, will progress from the purely individualistic interpretation of music in simple rhythm and movement to the co-operative group dancing which is often remarkable for its beauty and originality as seen in the picturesque living folk dances of India. It is of utmost importance that in these early stages the children themselves should be the creators, and that they should' be given every opportunity for the play of imagination and what is equally essential, that complete relaxation which will help to build up polse and repose.

A chain of juvenile organizations must be set up all over India and the most popular activities of these organizations should be games, leagues, rullles, displays and demonstrations of country and folk dancing. The juvenile organizations being voluntary youth organizations should be left free to develop along the lines and social trends of their own communities and milleus.

# THE HANDICAPPED CHILD

Special schools should also be provided throughout India for the physically handleapped and mentally defective or deficient children such as the blind or partially blind, the deaf or partially deaf, the deaf-mute, the crippled, the epileptic, the bedridden, the stammerers or stutterers and the mentally deficient child. Here again, we would need a welltrained staff of specialists in each field and as hardly any such staff exists at present beyond a few scattered individuals here and there, provision will have to be made for the training of specialists in the care of the physically handicapped and subnormal children and for psychiatrists, psychologists, medicosocial workers, psychiatric social workers, medical experts and teachers. Each special school must be equipped with apparatus and material for the type of defective children catered to and the physical surroundings of such a school must be carefully studied and planned.

Nor should the spiritual and moral training of every child in India be neglected as it is that training primarily which will help him to stand firm under the pressure of life and grapple with undermining influences, life's battles and unbearable situations in this none-too-benign a world. Parents, teachers and others responsible for gulding children should be ever aiert to the importance to the child of facing specific situations, as such situations provide the occasions for vital and creative religion to function. Basic spiritual values as distinguished from varying mechanical forms, rites, rituals should be the goal of every adult teacher of religion. These adult leaders themselves should be persons of the utmost moral integrity and of the highest ideals and should have a vivid appreciation and practical personal experience of spiritual values and spiritual development and progress. They should treat religion frankly, openly, objectively as an important factor in personal and social behavier so that children would learn to have tolerance towards one other and narrow bigotry would be rooted out completely,

As for the destitute, delinquent, neglected, beggar and street children who form the basis of the most acute problem in India, the best planned system of Institutional care throughout India will be needed in the beginning. Such children should be dealt with Intelligently as society's charges rather than as society's outcasts with the Court and Institution shaped to return him, whenever possible, to the normal stream of hie. It must be pointed out here that if every child in India is given the right to grow up in a family and a home with an adequate

standard of living and the security of a stable income as the surest safeguard against social handleaps; if he is afforded protection against labour that stunts his growth mentally or physically, limits his education and deprives him of the right of comradeship, play and joy; if he is given satisfactory schooling, health services, social, recreational and cultural facilities; if he is given an education which, through the discovery and development of his individual abilities, prepares him for life and thorough training and vocational guidance and sex education prepares him for a living which will yield him the maximum satisfaction of his needs, such phenomena as the destitute, delinquent, neglected beggar and street children would cease to exist in India.

But because our socio-economic system in the production, mass neglect, mass rot and mass decay of these innocent children in India, the most important task of future reconstruction will be the organization of an effective plan for Institutional care so as to stop this colossal waste of human energy and manpower and to redirect and utilize this vast reservoir of energy for nation-building activities.

To achieve these ends we will need a larger, and specially trained police force to round up the innumerable little urchins thronging the streets, footpaths and station-platforms of India. The children
should also be rescued from brothels, hotels, docks
and other questionable localities and trades and
from crueity, exploitation, victimization, slavery and
drudgery under the most indecent, unhealthy, insanitary and morally dangerous influences. The
public should give every assistance to the police in
the rounding up and rescue of these children. After
the children have been effectively rounded up or
rescued, a powerful and well co-ordinated machinery
for rehabilitation should be set up on a nation-wide
basis. This machinery should consist of:

- 1. An All-India Children Act.
- Juvenile Courts,
- 3. Remand Homes,
- 4. Psychiatric and Child Guldance Clinics.
- 5. Probation Officers,

Institutions for the care of the delinquent and the destitute,

 Provincial, District and Village After-care Associations.

The All-India Children Act should be essentially a social and protective piece of legislation in which inherited penal doctrines of a legalistic nature and lawyers (who distort and quibble over sections and points of law with utter disregard for the child and its needs and welfare, and who even warp the child's mind and character by tutoring him to tellies) should have no place. The Act should be social, psychological, scientific, protective and remedial in nature and should be so tramed as to effectively protect and prevent the child from destitution, exploitation, victimization, critefty and

moral danger leading to delinquency. This act should operate in every Province, District and Village of India

Independent full-time Juvenile Courts should be set up in all the cities and villages of India. These Courts (in keeping with the Children Act which is to be a social piece of jegislation) should exercise jurisdiction of a parental nature and should concentrate on the child and its needs and welfare rather than on the offence. The proceedings should be as simple and as informal as possible and the Magistrate should endeavour to study through the Probation Officer the economic, sociological, psychological, educational and medical background of the child and try to find out the causes that led the child to commit an offence, and, with the help of the psychiatrist, plan a treatment programme for the behaviour problem if any, or arrive at a constructive rehabilitative programme. Thus delinquency is to be viewed as a social problem and each child offender is to be studied as a social case. If the principles of protection, prevention and remedial care are accepted and the Indian Children Act is framed along these lines, the Juvenile Court Magistrates will have to change their outlook completely and shift their emphasis from criminal law and punitive justice to an understanding of the behaviour problems and disorders of the child and a study of the social, economic and psychological causes that have led the child into anti-social ways. In short, the Magistrates would have to be specially trained in sociology, psychology, psychiatry and the modern scientific approach to juvenile delinquency.

There should be a network of Remand Homes and Institutions for the care of destitute and definquent children all over India and these Institutions should approximate, as far as possible, to the home school and community life of the child. For, the habitual truants there will have to be a certain number of walled-in Institutions. But all these Institutions whether walled-in or open should invariably and always have a professionally trained staff of well-paid, well-qualified, well-trained Superin-

tendents, Probation Officers, Psychiatrists, Psychologists, Peddatricians, Nurses, Matrons, Psychiatric Social Workers, Occupational Therapists, Vocational Guidance Experts, Physicians, Venerealogists, Medicosocial Workers and adequate medical staff. There should also be, in these Institutions, Child Guidance and Psychiatric Clinics and the requisite facilities for school, recreation, occupation, extra-curricular activities, physical training, clubs, dramatics, music and cinema shows. There should further be ample provision for the physical needs of each child such as selected and balanced diet, nutritious food, decent ciothing, comforts of a home and medical care and above all the personal human touch

To supplement the work of these Institutions there should be Aftercare Associations in every Province. District and Village of India with the regulaite staff of well-trained, well-qualified and wellpaid probation officers, so that when a child is released from an Institution and sent back to his own Province or village they would help the child to settle down to normal life and get absorbed again in society as a worthy citizen. These associations could also act as supervision agencies so that when a child runs away from home and is sent back to his parents at the native place by the Juvenile Court, the Probation Officers of these Associations would see to it that the child attends school or work at his village and is well looked after by his parents or guardians and does not run away again.

Thus it will be seen that the problem of the child in India is a vast and complex one, and vast and varied resources of the nation including men, money and material will have to be harnessed if it is to be coped with successfully. The greater our neglect, blindness and ignorance in the past the graver and heavier our responsibility for reparations and constructive planning in the future and the sconer we realise this the better. For, no national planning can be conceived without planning first and foremost for the child who alone can be the future bulwark of a prosperous, wealthy and powerful India.

# LABOUR WELFARE

# M. V. MOORTHY

Dr. M. Vasudera Moorthy is a Lecturer in Sociology at the Tata Institute of Social Science.
Receivly, Dr. Moorthy was deputed by the Institute to trace throughout India to study Labour
Welfore in all important undustrial cities and areas of India.

Dr. Moorthy quees in his article a wide and correct definition of Labour Walfare, a definition which is above all practical. The comprehensive propraisme suggested as a result of study demands that Labour Welfare should be done primarily and solvin the interest of babour, and includentally make the labourer an efficient asset of the industry. Dr. Moorthy points out that with high ideals, clean mottos, correct leades thy, efficient organisation and a comprehensive programme, the entire life of the labourer can be dealt with, so that he new became the seal backbone of prosperous industries.

ABOUR Welfare tomorrow, or in the immediate future, will have to be based on the conditions of today. The approach to this problem, as to all such problems, can be many-sided. It can be Utopian and idealistic, liberal or revolutionary. A scientific approach is possible if the present is properly and adequately explored and analysed, and future trends are determined to guide planning. In attempting to suggest the best possible programme for labour welfare in the immediate future, the problems must be approached practically and factually without any political bias or undue enthusiasm for any 'ism'. Yet this outlook is not opportunistic or purely utilitarian; it will neither leave ideals out of consideration, nor fail to suggest radical alterations in outlook, methods and programmes. In the scientific treatment of a problem, it is possible to eliminate theoretically the Impossible, and discuss the possible In terms of real conditions and circumstances, Behind this scientific outlook remains an unalloyed and absolute desire to reach only one uncompromised objective, the real welfare, happiness and benefit of labour.

#### WHAT IS LABOUR WELFARE

Labour welfare work is associated, on the oegative side, with the counteracting of the baneful effects of the large scale industrial system of production, especially capitaistic so far as India is concerned, on the personal, family and social life of the worker. On its positive side, it deals with the providing of opportunities for the worker and his family for a good life as understood in its most comprehensive sense. This personal objective alone is not adequate. Labour welfare is also fundamentally lo the interest of the larger society, as the health, happiness and efficiency of each individual connotes the general well-being of

all. Taken thus, labour welfare is an essential part of social welfare. It means the adjustment of the labourer's work-life and family-life to the community and social life around.

#### THE NEED FOR LABOUR WELFARE

The industrial system of production, as at present organised, is full of harmful effects on the worker's life and actively loterferes with his normal well-being and legitimate participation in social life. Indeed, it requires not many arguments to demonstrate that our labourer is ill-paid, under-nourished, works for long hours under nerve-racking and unhealthy conditions, inhabits dark and dismal quarters, and lives his leisureless and sickly life in want of knowledge and recreation. His is a life not only unknown to fortune and fame, but unknown likewise to joy and beauty. When we add to this the fact that most of our industrial workers are drawn from their simple rural homes and are not yet completely acclimatized to their urban surroundings, the situation assumes tragic significance. They arrive in hope and stay with pessimlsm. Losing their old zest in life they develop new complexes. Across the brief channel of their life they pliot their weak vessels in perpetual storm.

The maladjustment, handicaps and lil-health of the vast industrial population, which was rapidly increasing, and which has multiplied many-fold during the War and will continue to grow still further and faster as India is now determined to be lodustrialized, has seriously impaired national health. This oeglect of the worker has been mainly responsible for the industrial backwardness of the country, and if the genuloe welfare of the worker is not dealt with by the State in oc-operation with the employer, then it will be idle to hope for speedy national progress which is demanded by all sections of the people. It is time that these evils are neither consciously perpetrated nor perfidiously upheid by the capitalists.

Impersonalization of relationships is inherent in modern factory economy. It leads to lack of understanding between the employer and the workers, to suspicion on the part of the latter and callousness in the former. The much-talked-of lowness of the wage and the consequent miserable standard of living of the worker is nothing but the result of the employer's loyalty to competitive individualistic economy, which treats the worker as a pair of hands and nothing besides. What with rationalization processes and a score of other "scientific" perpetrations the worker is being looked upon as a unit of energy complementing the power of the machine. His motions are marked out, fatigue is figured, and output is fixed. His efficiency is graded and he is paid according to his "ablity". In the interests of his health and work he is advised to consume so many numbers of calories per day. The worker is treated as a calory-consuming and energy-expending apparatus to be used for purposes of production.

This treatment of the worker as a commodity is not the only result of modern factory economy. A factory concentrates thousands of workers and it is natural for these to want to live in the neighbourhood of their work-place. House rent, in the hands of avarlcious landlords, naturally rises and hence the workers either share rooms and rent with friends or live in cheap jerry-built constructions. Having neither knowledge of sanitation nor the means to live cleanly, they soon convert their habitations into slums and become naturalized to fifthy lives. In citles, where thousands of factories are situated closely, the problem of labour housing becomes aggravated. Entire areas are rapidly turned into slums. While admitting that other factories also engender slum life, It may be asserted that slums are the results chiefly of industrialism. These slums are not created by avaricious and anti-social landlords only; housing facilities created also by the governments, the municipalities and even well-meaning employers have lacked bare human considerations. Neither principles nor ideals nor knowledge have guided their construction. The inhumanity and ignorance of the State and Its branches have been more glaring and tragic than the inevitable selfishness and profit-motive of the landlord.

Now these dismal facts, which appear to flow from the structure of modern Industrialism, render it difficult for the worker to make his life decent and dignified. His life is full of crowded hours; and belonging to a too numerous fraternity the labourer has lost his individuality in the mass. In the face of the overwheiming demands of the machine there is danger of his being dehumanised. Hence the need of a new vision, a new understanding, a new outlook and a new plan.

#### LABOUR WELFARE IN INDIA

Labour welfare work in India has not a long history. Therefore, it has not yet had time to develop any technique, nor define its scope and activities. In the early years of industrial development. whether in plantations or in mines, in factories or in docks, no attention was given to the amenities of labour. The very newness of machine production, the anxiety incidental to the initial marshalling of capital resources, the consequent speculation, the getting of raw material, the capturing of markets, the fighting of foreign and native competition, the making of adjustments with an unsympathetic government, - these were some of the factors which, perhaps naturally enough, engaged the chief interests of the capitalists and led to the neglect of labour welfare and Interests, Consequently, labour was characterised by long hours of work, low wages, appalling insanitary working and fiving conditions and absence of any facilities.

These intolerable conditions led to labour investigations which resulted in the passing of a series of statutory regulations (Factory Acts. Mine Acts. etc.) to control living and working conditions as well as the payment of wages. The scope and object of these Acts have been gradually extended by amendments. And new Acts like Workmen's Compensation Act, Maternity Benefits Act, Payment of Wages Act, etc., have been passed to define and enforce the responsibilities and duties of employers towards their employees. While these Acts have mitigated some of the extreme hardships of the workers, it must be admitted that they only seek to obtain the minimum benefits for them. Moreover, our labour legislation is still dominated by sterile legalistic concepts and contractual view of labour. The statutes have many 'lacunae' and loopholes of which the employers frequently take advantage. Also, they do not provide for efficient supervision and enforcement of the conditions ,they lay down. Labour legislation in India has timidly touched only certain aspects of labour problems; It has yet to assume a positive and more comprehensive role.

This is not to imply that nothing more than what is demanded by the Labour Acts has ever been undertaken by any of the Indian employers for the benefit of their workers. Housing and dispensary services, to at least a small portion of their workers, were amongst the earliest benefits provided by many large Factories, Municipalities, Railways, Ports, Mines and Plantations. For a long time the provision of any other amenities was considered to lie beyond the scope of labour management. Very rarely was the welfare of the worker's family included in the programme. Gradually, wherever labour colonies were built away from the general population of the town or the city, elementary educational facilities of some sort were provided for the children of the labourers. The experiment in labour colonies in Nagpur, Cawnpore, Calcutta, Madras, Madura and in a few other places has brought out the need to treat the labourer and his family as one unit for purlabour welfare work as a most necessary part of industrial management. The part which labour plays in production - as important as, if not more than, that played by capital - should be at once recognised. Industries have now reached a stage when they are no longer individual concerns but national assets. We must have a more rational and, at the same time, human understanding of the dignity and destiny of industries. If Industrial concerns have to fulfit their useful function and play their part as national assets, they must also function as social service agencies, at least as far as their workers are concerned. In the future India, every industrial unit must be a social service agency for its workers. The two ideas, "industry" and "social service", must be inseparable. Industry is an Institution; social service is another institution. Both these must coalesce and function as one in the new social economy. Thus viewed, welfare work becomes. in its most comprehensive significance, an inevitable and indivisible part and function of Industrial iife. The role of industry is no longer a purely economic one, but a social one. Welfare work is an organic part of the industrial body. And the assumption of responsibility for the welfare of the worker is a legitimate function of industry. The exercise of this organ, this faculty, this function will certainly lead to the health and vitality of industrial life The idea of an Industrial institution functioning also as a social service institution is a new philosophy which our industrialists should accept. Then only labour welfare work can be liberally and sincerely planned and based on sound and lasting ideals. Even an efficiently planned welfare programme, concerned with the correct motives, cannot prove successful unless consideration is given to some fundamental aspects of the worker's life in its industrial bearings.

# BASIC BACKGROUND FOR SUCCESSFUL

#### WELFARE WORK

Mention has already been made of important obstacles to welfare work inherent in the present economy. No factors are more insidious in their operation than low wages and want of leisure on the part of workers. A detailed discussion of wages is beyond the scope of our present subject.

Low wages can never enable the worker to maintain the decent standard of life which is aimed at by the welfare programme. If labour welfare is the constructive plan for the betterment of the life of the worker, low wage provides that destructive element which will annihilate the benefits of that welfare programme. Besides low wages, which in turn mean bad housing, malnutrition, bad health and neglect of disease, inadequate care and education of children and indebtedness will unnecessarily add to the demand of more welfare work, and more expense to undo the ravages caused by low wages. It can be generally stated that unless the principle of the minimum wage - to include decent housing, adequate nourishment and clothing, cost of transport, cost of medical relief, education and recreation for all the members of a family - is accepted, welfare work can hardly succeed in its mission.

Touching lessure, we may only mention that the workers must be emancipated from their present drudgery if they have to realise the life beautiful. All culture is based on the free and creative utilization of leisure. It is well said that slaves have no leisure; and it may be added that want of leisure creates slaves. All older civilizations were the creations of anistocracles which believed in exploitation, in leisure for the few and slavery for the many. On the slavery of the many the leisure of the few was based. Behind all the culture of the ancients were the hunger and groans and overwork of thousands.

Democracy has uprooted the theory of leisure for the few and labour for the many. Science has put in the hands of man instruments to emancipate him from thraldom. It has made leisure possible for all. If humanity is faithful to its new philosophy, it must at once release man from overwork, and provide the optimum opportunities for the release of the impulses of the masses. Masses must become real participators and creators of human culture and civilization. The positive object of welfare work is to give true meaning to the worker's life; and life will have meaning only in terms of ideals and cultural achievements. It may be argued that welfare work is called into service for the very reason that the worker has no time to look after his own welfare; and that a leisured person can easily look after his own welfare. This view is based on a false philosophy of welfare work. It satisfies itself with canteen services, medical treatment, propaganda and gratuities. Such welfare work cannot take root. Welfare work does not mean catering to the needs of workers: it implies the kindling of the worker's interests in various healthful life activities. The welfare department will train the worker to utilise his leisure creatively. The abolition of night shifts and the introduction of the 40 hours week, with enough holidays and leave with pay, are imperative to give the workers just enough leisure to devote their time to human life, to education and cultural life, recreation and social life.

# LEADERSHIP FOR WELFARE WORK

The welfare personnel constitute the leadership of welfare work. They are the moving spirit of welfare activities. Therefore, they have to be selected with great care and impartiality, with special regard to qualifications required for their functions. The personnel should be composed of honest and brave men and women, persons who have vision to design and independence to execute. It is most fundamental to realise that Welare Officers are social engineers. QUALIFICATIONS OF A PERSONNEL OFFICER

Appointment of trained welfare personnel is a pre-requisite condition for successful planning. Welfare work is an art which works with the instruments of science. It cannot be left to laymen. The persons in charge of welfare work should be those who have a profound knowledge of economic conditions and principles. Besides, they must have an understanding of human psychology. They should

be able to judge independently motives and actions

of individuals and groups. They should be capable of tactfully, sympathetically and boldly meeting situations as they arise. Thus, for instance, an industrial strike creates a psychological situation. It is only persons who can quickly group the complex workings of the human mind and anticipate trends that can be helpful in solving the problem.

It is well said that the Personnel Officer is the liasion officer between the employees and the employers. He keeps contacts between the workers and the management and cements the relationships of the two. He interprets the problems of the one to the other and brings about sympathy and understanding. By Infusing faith and confidence in either he kindles cooperation between the two. The Personnel Officer is greatly responsible for this spirit of cordiality between the parties. He is there to neutralize the effects of impersonalization in modern industries, In one word, he stands for the workers so far as the management is concerned, - representing the human interests of both sides. This does not mean that the Personnel Officer represents the management in all the particulars of business. No: his province extends only as far as the welfare of the workers is involved; from recruitment to conditions of work. promotion and dismissal, recreation, housing, health and education. The fundamental objective of the Personnel Officer is to make the life of workers happy and healthy. It is essential that the Personnei Officers of tomorrow should have an adequate knowledge of law; because the State is assuming a more and more positive role as regards social legislation, and many a situation would arise when the Personnel Officer would be called upon to explain the legal position to the workers as well as to the management. A welfare department should have as its head and leader a Personnel Officer who should be a person well trained in (1) Social Economics and Statistics; (2) Psychology; (3) Sociology, Theoretical and Applied; (4) Law and (5) Philosophy.

Possessing these academic qualifications, it can be said that the Personnel Officer is primarily an administrative and executive official. As such, his organising ability, efficiency and temperament should be outstanding, so that he is able to command, control and befriend the most important asset of an industry — the labour population.

In the extensive Labour Welfare Department of a modern industry there are many other officials who are needed to fulfil dutles of leadership and responsibility. The chief of these will be the Labour Officers in charge of departments, the Medical Officer, the Women and Child Welfare Officer, the Physical Director, the Education Director, the Euperintendent of Housing Administration and Management and the Family Case Worker. Under these officers will work an efficient staff of supervisors, instructors, statisticians and cierks. The special officers will naturally possess regulate qualifications and experience to fulfil their duties with ability, responsibility and initiative. While much depends on leadership provided by the personnel, welfare work cannot succeed unless the scope and

activities of each officer are fairly well-defined. Welfare work has a definite function to fulfil and since it works through a definite body of officials it should be clear about its field of activity. The techniques of welfare work that are to be adopted also depend on the specification of the province of work. Indeed, the visualising of the perspective of one's work and authority is the first step in efficient administration.

The Royal Commission on Labour in India in their Report (1931) suggested the appointment of a labour officer for factories, such officer to be in charge of workers' welfare, besides being responsible for engagements and dismissais of staff. In pursuance of this suggestion almost every large factory today has its own labour officer. Where there is no specific appointment made of the labour officer, the welfare activities of the factory are usually conducted by a general committee composed of the members of the management. The smaller factories have neither labour officers nor welfare activities.

#### SCOPE OF LAROUR WELFARE WORK

It is somewhat difficult to accurately lay down the scope of labour welfare work. Welfare work is a comprehensive term. When it is applied to a flock of sheep or a herd of cattle it is easy to perceive the field of work and suggest a programme. But labour is composed of dynamic individuals with complex needs. In a world of changing values where ideologies are undergoing rapid transformation, rigid statements about the field of welfare work are bound to be revised from generation to generation. Moreover, labour welfare work is increasing with increasing opportunities and needs to meet varying situations: it is also increasing with the growing knowledge and experience of techniques. An able welfare officer would include in his programme whatever activity would conduce to the well-being of the worker and his family. He would work on existing programmes as well as initiate new ones. The test of a welfare activity is that it removes, directly or indirectly, any hindrance, physical or mental, of the worker and restores to him the peace and joy of living.

Welfare activities fail into three categories: (A) Welfare activities inside the Factory or the workplace, (B) Those outside the Factory or the workplace, (C) General Welfare Measures. Welfare work embraces the worker, his wife and children. The following list, which is by no means exhaustive, gives the items under which welfare work should be conducted inside the work-place and outside the workplace. The Items which specifically refer to workers' children and workers' wives are also indicated. The list includes general welfare measures.

# CONDITIONS OF THE WORK ENVIRONMENT

- Workshop Sanitation and Cleanliness:

   (a) Temperature, humidity, ventilation, lighting, elimination of dust, smoke, fumes and gases
   (b) Convenience and comforts during work, operatives, posture, sitting arrangement, etc.;
   (c) Distribution of work hours and provision for rest times, meal times and breaks;
   (d) Workmen's safety measures.
  - Two hundred and eleven

- 2. Factory Sanitation and Cleanliness:
  - (a) Urinals and lavatories; (b) Bathing facilities; (c) Provision for spitoons, water disposal, disposal of wastes and rubbish, general cleanliness; (d) Cleanliness, whitewashing and repair of buildings and workshops; (e) Ingress, egress, passages and doors; (f) Care of open spaces, gardens and roads.
- 3. Provision and Care of Drinking Water.
- 4. Canteen Services.
- Management of Workers' Cloak Rooms; Rest Rooms and Library.

#### WORKERS' HEALTH SERVICE

- 1. Factory Health Centre:
  - (a) Playgrounds; (b) Health education; (c) Medical examination for workers; (d) Health research
- 2 Factory Dispensary and Clinic;
  - (a) General treatment; (b) Treatment of individual diseases and fatigue; (c) Treatment of accidents
- 3 Women and Child Welfare:
  - (a) Anti-natal and pre-natal care;
     (b) Maternity Ald,
     (c) Infant welfare,
     (d) Creche;
     (e) Women's general education,
- 4. Workers' Recreation:
  - (a) Physical; (b) Playgrounds; (c) Outdoor Life, (d) Athletics, (e) Gymnasium; (f) Women's recreation
- 5 Education:
  - (a) Reading room, (b) Library; (c) Circulating Library, (d) Visual education; (e) Pictorial Education; (f) Factory News Bulletin; (g) Library Classes; (h) Adult Education; (l) News Review; (l) Lecture Programme; (k) Debating Union; (l) Study Circles; (m) Education of workers' children; Nursery School, Primary School; (n) Women's Education; General education with emphasis on hyglene, sex life, family planning, child care, domestie economy, home handicratty.
- 6. Cultural Activities:
  - (a) Musical Evenings and Circles;
     (b) Art
     Circles;
     (c) Folk songs and stories;
     (d) Histrionics;
     (e) Folk dancing;
     (f) Festival celebrations.

# LABOUR WELFARE

- Factory Council consisting of representatives of labour and employers.
- 2. Workmen's Arbitration Council.
- 3. Vocational and Job Adjustment,
- Social Welfare Department's co-operation with Personnel Administration, especially for Case Investigation, Interview and Vocational Testing.
- 5. Employment Follow-Up,
- 6 Research Bureau.

# LAROUR'S ECONOMIC WELFARE

- Co-operatives or Cost-price Shops for consumers' necessities, especially grain, vegetable, milk, meat, oils and ghee, cloth and daily requirements.
- 2, Co-operative Credit Society.
- 3. Thrift Schemes and Savings Bank,
- 4. Unemployment Insurance.
- 5. Health Insurance.
- Employment Bureau.
- 7. Profit Share and Bonus Schemes.
- 8. Factory Transport Service,

#### GENERAL WEI FARE

- 1. Housing.
- 2. Family Case Work,

The items in the list we have given above are self-explanatory. But their details vary according to the nature of the occupation, the number of workers concerned, the character of the work-place and several other factors An efficient Personnel Officer can easily fill in the details of each programme of work, and even add new items. It must be insisted here that welfare work in the work-place, though somewhat different in character from welfare work outside the work-place, is not unconnected with the latter. Indeed, welfare work inside and outside the work-place, as well as general welfare work and the economic welfare of the workmen, must be intelligently co-ordinated with one another.

Though every Item of welfare work in the list is very Important, special remarks may be made about a few ones. Health and education of the worker should receive the constant attention and care of the Personnel Officer. Indeed, there is no opportunity which cannot be utilized for the furtherance of the worker's health and education. By health we do not mean merely the absence of iliness but the positive presence of vitality in the body and mind. This depends on the proper conditions of work, nourishing diet, sanitary conditions of living and wholesome and healthy habits. The Personnel Officer should secure all these for the workers, if they have to lead useful lives. He should insist on the management to make it possible for the workers to have these essential conditions for health. He may suggest improvements in the conditions of work, such as installation of exhaustion plants, humidiflers, cooling plants and other scientific devices wherever necessary; he may inculcate in the workers the principles of making and taking a nutritive diet and, maybe, even provide it through the mess or the canteen; he may plan housing and cause colonies to be built, effect improvements in existing ones and supervise over hving conditions; he may teach, by example and precept, the healthful habits of living. In all these cases the services of the medical officers or the colony medical officers, as the case may be, are invaluable. Though the function of the hospital is obviously that of treating aliments and dispensing medicines it should fulfil a positive and

nobler role. The hospital should be made a centre for dispensing health knowledge. Whether the person is at work or at play, at the bath or at his meal, health principles can be incuicated with reference to the changing contexts. In other words, the hospital with its officials should help the Personnel Officer in educating the worker to know and maintain healthful habits in his work life, play life, sex life, individual life and social life. The worker's wife and children should be similarly educated.

Likewise unbiquitous and versatile is the role of education. Without education a rich man's life is poor indeed, with it a poor man's life is rich. Education touches the entire life of the individual. While he is at work the worker should be made to adjust himself to his job, psychologically, physically and intellectually. While he is operating on the machine it is easy to teach him what the machine is like, and how it works. In the beginning he may learn the elementary principles and later have a knowledge of the complex design and structure of the machine. and finally know the history of its invention and its inventor. We believe this scientific knowledge on the part of our workers is not at all irrelevant and useless, though it may appear to be so, considering the present state of their abysmal ignorance. This knowledge of the machine, its working and its history has tremendous psychological effects on the worker. He finds meaning in the infinite motions of the monster. Since he understands its behaviour, he is not overawed, but keeps his dignity. He will consider himself as a master of the machine instead of being its tooi. He will work intelligently and hence efficiently and will claim and deserve his promotion, If proper educational facilities are provided from the beginning and a good atmosphere is maintained, the intelligent worker may even pursue his scientific interests and crown his career with fruitful achievements. What pessimist can dare affirm that in the present worker, so much humiliated and degraded, we have not an embryonic Visvakarms or Vuicanus?

The programme of education for the worker may appear to be very ambitious. But the subjects we have included are most necessary for the full expression of life. Even if a man is to be a worker all his life, and his wife and children and his children's children and all his generations are to be workers, they still have to know the fundamentals of life, of the sciences and the arts, of the achievements of mankind in various fields. We cannot shut out "culture" from the life of the worker, be he ever so busy. Simple and elementary books have to be written for the adult workers and courses have to be specially designed for them.

In devising this scheme of studies for the workers we are well aware of their present liliterate condition. But adult liliterate is a passing phase. Adults can be made literate and by education of the children, who are future adults, the problem of illiteracy is bound to disappear. It may be argued that workers have no ielsure to know things and study them. Precisely that is also our argument. We cannot perpetuate a system of economy which manifestly

confesses that it allows no leisure to the workers to improve their bodies and minds. We do not believe in a philosophy of the need to maintain a leisureless class; nor in the inevitability of a leisureless class; nor in the inevitability of a leisureless class in social life. The belief in the inevitability of such an invidious phenomenon is incidental to exploitational psychology. Even with whatever leisure is at the worker's disposal the experiment may be tried and useful results obtained. We must repeat that what we have designed for the workers are only elementary studies.

So far as the worker's wife is concerned, her education must jay emphasis on hygiene, domestic economy (covering cooking, washing, etc.), sex life and child care. Practical education in knitting, tailoring, etc., should be given to her if she is not a worker. If she is a worker we discourage her from engaging herself in further work as it invoives additional strain. Domestic duties, child care and companionship of her husband are by themselves sufficient to occupy her leisure hours. Concerning the children, their education should be the same as given to other children of the nation. Worker's children, aiong with others' children, are the children of the nation. They should not be made working-class conscious; and their education should be planned along national lines and with reference to human destiny and Ideais. Given a fair measure of general and practical education the boy should be free to "adventure" In ilte once or twice and find his own "cailing" as a youth of character. If the early education of the child is good, we hazard to avouch that the youth will not miss his noble work, prophets of evil and bad social systems notwithstanding. But, at present, a great deal has to be done before thinking of educating the worker's child. The child's physical and social environments have to be improved; the child should be washed, fed and clothed The Personnei Officer cannot get these things done through the creche and the nursery for all time. The parents of the child have also to be educated in the ways of bringing up the child. The social worker should not relieve the parents from child care. He should teach them the art of child upbringing and supplement their work by institutional care so far as is necessary. We should not merely "draw" the child away from the bad environment; this will not solve the problem. For the environment which is degenerating children will produce another set of degenerate children in course of time and the problem will arise again. Therefore, the right approach is to attack the environment and make it impossible to produce bad children. Make homes healtby and children will be strong.

# TECHNIQUES OF LABOUR WELFARE WORK

What should be the techniques of labour welfare work. In spite of resources and clear statement of the objectives, welfare work is bound to fail if the techniques employed are wrong. Employment of techniques is an art and no hard and fast rules can be laid down for it. At the outset it must be stated that for purposes of welfare work the labourer, his wrife and children have to be treated as one unit,

while the respective needs of each have also to be kept in mind. Failure of most welfare work is due to the lack of essential correlation of the needs of the worker, his wife and child. It has already been mentloned that welfare work inside and outside the work-place also has to be linked up. Indeed, welfare work outside the work-place is a kind of follow-up service, and welfare work inside the work-place with reference to that outside is of the same character. Again, one Item of welfare work as far as possible has to be linked up with other items so as to present a chain of collateral, successive or progressive activities. In other words, one activity must be adjusted and related to another as one which should be simultaneous or one which should follow as the next step. Life is muiti-purposive; and no one activity should receive more attention at the cost of other activities Welfare activities have to be well balanced Welfare workers in charge of programmes, unfortunately, do not realise that programme making is a difficult science, requiring planning, method and experimentation. The ordinary special worker has the tendency to initiate programmes carried out at different places. He does not make allowances for difference in aims, suitability to place and participants, local needs and consideration for the participants' cultural level, intelligence, desire and interests.

Welfare programmes of the future will make a clear distinction between basic programmes, secondary programmes and special programme. Basic programmes are organised on the basis of universal participation of pre-determined age and sex groups. Secondary programmes have limited participation on the "Interest" basis Special programmes are advanced programmes specially provided to givenaximum opportunities for self-expression, self-development, creative and cultural achievement. The science of programme-making consists in planning them on the above basis, at the same time carefully determining and changing them to provide for the development levels of participating groups.

The art of programme-making consists in timing, modifying and changing programmes to maintain

the highest pitch of enthusiasm and interest of the participants. Reactions of the participants are carefully watched and noted, and the personal initiative of their officer is ever in readiness to give those special touches which hold the interest of the participants and keep their emotions ever alive to make the best of each programme.

As far as possible, workers should be actively associated in welfare work and every activity has to be conducted with their full consent and co-operation. Committees composed largely of workers and partly of the members of the management should be entrusted with the duties of adumbrating programmes and carrying them out. The Personnel Officer, who will be the General Chairman, will correct and disclpline, guide and counsel, instruct and inspire the committees in their thinking and activities The association of workers in welfare activities has great moral advantages. It creates confidence in the mind of the workers. It fosters public spirit, sense of responsibility and leadership qualities. It makes the workers self-reliant and able to manage their own problems. The crown and culmination of welfare work is to enable the worker himself to plan and carry out his welfare. The weifare will have significance and purpose and the welfare department will have seen the frultion of its labours.

These are the lines along which labour welfare work may be conducted in future India. The programme that is outlined can be immediately given effect to in all the work-places, whether they are factories, mines or plantations, and in labour bastees or colonles wherever they exist. Ignorance. Ill-health and dirt are the three glants labour welfare has to fight, in the home-life, personal life, work life and community life of the worker. They have to be fought out steadly and scientifically on all the four fronts. Man has planned for cotton, coal and coffee and yet done little for his fellow man. In the coming years the labourer shall be made mightler than the machine with which he works, more fruitful than the dust on which he treads, richer than the earth into which he digs.

# ROLE OF WOMEN IN FUTURE INDIA

### SHRIMATI KAMALADEVI

Shrimali Kamaladei i Challopadhayaya, President, All-India Women's Conference, at present, Member, Mb India Congress Commuttee, is one of the few women leaders who have charpymored the cause of Indean foredoon and Indian womanhood in the United States, Turops and elsethere in the world. 4x a politician, as nu emitmed journalist unit as an estimatatic and whole-hearted social worker, Shrimali Kamaladeich has won a rate honory, both here and obroad.

In the article below, Shrimate Kamuladeri Chattopathayaya has marked out the high social and economic status which nomen have enjoyed in Indin's great past, and has proved that even one they are capable of plugging their englishy of the shour seth men is around felia. Her emphasis on the need for a new social mornity is most illuminating. In planning the future of social neighter, Shrimati Kamuladeri nanis are orientalition of the women's social and economic status which will render the Indian woman altogether in new, health and efficient axes of shuman process and civilization.

LANNING is an effort to organize effectively the threads of national life in order to weave a complete pattern which will ensure the maximum harmony and balance of forces. Such an effort is meant to provide the highest possible satisfaction to society as a whole within the available resources and limited circumstances. As the economic motive predominantly determines its social character, there is a tendency to put all emphasis on this aspect, and concentrate on planning the economy, neglecting its equally important social counterpart. Even where certain of the social factors are taken into consideration, they are mainly confined to the functional components of society, while other equally Important sections are omitted. The approach too is mostly remedial rather than preventive, as there is little desire to disturb the status quo.

But really speaking, genuine planning can mean little if it is confined only to the four corners of the present economic and social boundaries. Even assuming the establishment of a national peoples' government, a far more fundamental change is called for in a society such as ours where almost every constituent part of it is out of tune. The plan must undoubtedly help the maladjusted units to be harmoniously integrated into the whole, restore balance to the social pattern and help maintain it in a constantly and rapidly changing world. It must have vision to be able to see new paths for a continuous flow of life, and make traditions but the banks to

this stream to ease its movement, not dams that cut the course. This implies not merely courage to think originally and rationally, but also courage to act effectively and successfully.

### SOCIAL PLANNING MUST RECOGNISE THE RIGHTS OF WOMEN

Planning also needs a definite philosophy which is rooted in some basic concept, for then alone will It treat life as a whole, covering every aspect, leaving out no detail as insignificant. Gandhiii's approach is an example of this point of view. His experiments range from politics to dietetics, from husbandry to education, from Industries to medicine, for life is to him a single unit. It was, therefore, in the fitness of things that the National Planning Committee appointed by the Indian National Congress should have stated that "such planning is not only to be considered from the point of view of economics and the raising of the standard of living, but must include cultural and spiritual values and the human side of life". It seemed but logical that a special Women's Sub-Committee should be appointed by It to contribute to this planning. Woman has the same interest in national planning as man has (a fact which is so obviously overlooked all the world over), and unless the plan provides for her taking her proper share in the national life, much of its value would be lost. And although there are no "Women's Problems" as divorced from the general

problems of a society, their problems have assumed a special character owing to their present inferior social and economic position. Along with other disabled sections of society, women labour under certain handleaps, traditional, customary and legal which require complete adjustment. As the National Planning Women's Sub-Committee's Report states: "Planning may partly be done by economic changes but it requires a sound social structure where the individual is the unit and is assured of his or her fundamental rights. Apart from the obvious fact that there can be no effective planning of a nation's life with half the population left out of it, it is essential that woman should have her proper place in the scheme of things, and that she should be considered as an individual with the same rights as man. If freedom and equality are the bases of human development, woman must share in them", As Gandhlil has said "My own opinion is, that just as fundamentally man and woman are one, their problem must be one in essence. The soul in both is the same. The two live the same life, have the same feelings. Each is a complement of the other. The one cannot live without the other's active help the general qualities and culture required are practically the same for both the sexes Woman is the companion of man, gifted with equal mental capacities. She has the right to participate in every minutest detail in the activities of man, and she has an equal right of freedom and liberty with him By sheer force of a vicious eustom, even the most ignorant and worthless men have been enjoying a superlority over women which they do not deserve and ought not to have Many of our movements stop half-way because of the condition of our women. Much of our work does not yield appropriate results They are a peerless pair, each helps the other, so that without the one, the existence of the other cannot be conceived. and therefore it follows as a necessary corollary from these facts that anything that will impair the status of either of them will involve the equal ruln of them both 11 4

Society is but an extension of the home on which, in fact, it is founded. In the home, the partnership of man and woman is inevitable. It follows logically that women should be recognised as equal with men in the social order, and enjoy the same political, social, civic, economic and legal status with them

In 1931 the Indian National Congress in its famous Fundamental Rights declaration assured women an equality of position. It laid down: "All citizens are equal before the Law, irrespective of religion, caste, creed or sex, in regard to public employment, office of power or honour, and in the exercise of any trade or calling," †

In India, the irresistible call of battle for the Country's freedom has served to batter down more than almost anything else, the ancient China Walls of conservatism and, almost overnight, open for

the women new worlds far beyond their little traditional domestic orbit, new worlds where their functions expanded even as their vision and ideas. They had a place of their own to fill in that larger sphere beyond their courtyard. They were perpetually making as many discoveries in themselves as in their new world. They were ready to assume almost any office and fulfit any mission. They proved capable, devoted and dependable whether as dictators or captains, soldiers or messengers. They faced persecution, beatings, assaults with Indomitable courage. With electric speed and an irresistible force the Indian women began to come into their own. For, they who share in the struggle must share equally in the victory. Against this background, social thought today is moving on very rapidly. Women's organizations are busy consolidating these gains, to give them constructive forms. It is being Increasingly realised, however, that the old social framework no more fits the present picture. With India's rapid advance towards its goal of freedom. the need for the new structure has become more imperative than ever But in order to prepare a proper setting for the future, one should take cognisance of the past background, as that helps our thought processes to be rational instead of sentimental. For, we have today those who believe in an impersonal will which moves under the impact of objective forces and brings about the necessary changes without a cogent planned directive, while there are others who are content to pin their all on blue prints and take little count of historical and human forces. What is necessary really is to take account of all forces and give them a definite direction, like weeding out the old traces to lay a new garden.

### THE HIGH STATUS OF WOMEN IN HISTORIC TIMES

From earliest times, whether woman equalied man in actual physical strength or not, she has certainly not been inferior in skill and energy. Even today, amongst certain tribes, the women earry as heavy loads as the men, and some of them look bigger and more muscular than men. It is said that amongst the Bushmen the two look so much alike that it is not easy to distinguish them. As warriors, hunters, fishers, tillers, craftsmen, women have equalled men and such professions are still jointly carried on. But her one biological function imposes on her a period of helplessness which has, right through history, given man the chance of keeping the upper hand. Yet, this very handleap - If it can be called one inspired her to create and make certain functions her own, such as home crafts, cooking, nursing, spinning. weaving, pottery and gardening. These industrial abilities made her an economic asset instead of a slave. In fact, there is a theory that this very economic value made her such a desirable possession that man came to acquire a proprietory interest in her. Whatever the truth may be, as society became more complex with the advent of private property, the economic enslavement of women, with that of certain other groups and sections of society, became complete. It is important to note the fact that as,

Red Book 1, p 77.
"Hanjan', 24ta Febr., 1940
National Planning Committee Handbook No I p 2-3

economic and social inequalities grow and become more pronounced, dividing up society into different classes, they simultaneously affect the position of women as well. Hence, sex is one of the several maladjusted social relationships and, judging from the general character and the historical background, very much tied up with this entire question of social inequalities. Thus we have today a society in which by far the larger section of women are condemned to endiess, unrelieved labour along with their menfolk. while a small section of women are condemned to a patty irresponsible state of material comfort which is no better than a golden cage. Someone has described the latter type as the first waste product of the new economic system, the most elaborate extravagance of conspicuous consumption. The rich women and the poor alike until recently were in economic bondage to the men, all the world over. Even their earnings were not their own, and in some countries it is still so even now.

When the machine cracked up feudalistic society. making a terrific assault on the women's traditional functions, forcing women out of their age-old jobs, the large masses of women found that since they could not compete with the machines they must serve them if they were to keep starvation from their doors. This meant their moving into the squalid slums, living their services out for a wage, neglecting the home, leaving the children for the whole day, abandoning their familiar duties and tying themselves up to a mechanised routine which could never move their emotions or draw out their creative genius as the homecrafts had done. More and more, women came to depend on the extra-domestic world, both for their earnings and for their daily needs. Oppressive as these industrial conditions were for the entire working class, they were even more burdensome for the women, for now, in addition to their domestic duties or cooking, housekeeping, and rearing children, they had to work outside just as the men did. The economic slavery became double. In the reverse process the opposite class of women, driven to greater Idleness with the advent of the machine, sank into equal slavery. The general rise of mass movements, the cry for social justice, siogans of equality electrified all the suppressed elements of humanity, women no less than men. The compulsorlly idle women came forth with the demand for equal opportunity, equal political and civie rights, for wider education and full exercise of their powers and talents.

### THE STATUS OF THE INDIAN WOMAN: ITS PECULIAR PROBLEM

Happily, in India such demands have not led to type of sex-war that the West witnessed, as here the emphasis on the larger issues of freedom, together with a happier past tradition, has made the path easier for the woman. In ancient India, women undoubtedly enjoyed very wide freedom and equality with men. That they had every opportunity for intellectual growth is proved by the galaxy of women writers — philosophers, mathematicians, iaw-givera, astronomers — in the earliest Aryan writings such

as the Vedas. They took part in public debates, ruled kingdoms and marched armies into battle,

Hence, today there is no taboo as such against women entering any field or profession. The problems of the Indian women are also the problems of the present economic order. The future planning must, therefore, envisage certain radical changes in that economy as a starting premise. For, the present technological development, instead of relieving the workers from unnaturally long hours, has on the contrary led to rising unemployment and artificial scarcity. This is of special importance to us as so often women have supplied cheap labour or formed the labour reserve for employers to fall back upon in times of labour crisis. The driving of women back into the bowels of the earth to dig out coal, in the face of universal condemnation, is a glaring example of this.

Economically, ours is a predominantly rural problem as yet, and likely to remain so for some time to come. The vast majority of these women live in semi-serfdom and sometimes virtual serfdom, and sometimes virtual serfdom, and senearly half the rural population is landiess, and even where it owns land it is mainly in fragmentary, unconomic lots. For women, this problem is even more complicated as they do not, as yet, enjoy full property rights with men. Moreover, as in these backwoods educational facilities are nil or few and as girls, unlike boys, are unable to venture out to get an education, the handicap in their case becomes greater.

## THE DIFFICULTIES OF REFORM AND THEIR SOLUTION

Sex, no doubt, cuts across the class sections of society and carries with it certain burdens of its own that have to be handled separately. But we have to bear in mind the fact that the disabilities of each class are common alike to men and women, which makes it very essential for certain fundamental rights of human beings to be guaranteed in all spheres of life and the general social inequalities removed before the sex disabilities can be eradicated successfully. For, the two are in reality different phases of the same principle. Society as a whole, in the first instance, must be rid of the economic expioltation of one section by the other, and the traditional social disabilities attached to any of them as varnas or castes completely wiped out. Land must belong to the actual tiliers of the soil, all feudai bonds and obligations swept off; producers must have a share and responsibility in the production: everyone must have the means to a decent human existence in the material and cuitural sphere, with the necessary amenities of modern life provided - sufficient, nourishing, balanced food; ample clothing to allow individual as well as community cleanliness; adequate housing on a rational, planned basis with scientific conveniences and sanitary fittings. For, the present overcrowding leads not only to flitb and disease but equally to social disintegration, with particularly disastrous effects on children. Houses must be planned to suit families of varying sizes, and the size of the family should determine the accommodation, not the size of the income.

The beneficial fruits of science must be brought within easy reach of all; educational facilities should be available to boys and giris at least up to the age of 16 in rural and urban areas allke. On this general fundamental basis alone can a sound future edifice be built. From this broad outline we can proceed to the details. For only when the common rights of men are established can woman's rights be secured.

Although the establishment of the above principles will pave the way, It will not necessarily and automatically solve the women's problem. Let us first take the principle of equal economic status, which is a very fundamental Issue and the knottlest. In fact, it is the snag in our entire social relationship with man. From very early times, there seems to have been a tendency not to admit the economic value of a "woman's" function. Little recognised are the tremendous labours of the housewife, although even in the most highly industrialised countries housekeeping still remains the major industry and housewives the major section of the female population. To merely acknowledge that woman produces children and rears them, cooks food, keeps house is not enough. According to industrial economy, she produces labour power which is basic, for without it none of the other kinds of power could be operated. But that too is not a good enough argument. The housewife in sooth is as much of a working woman as any factory worker In fact, she expends more time, energy and skill over her tasks in the production of commodities than the unionized and legally protected worker, for her hours are unlimited, her tools countless, her obligations mountainous. Yet tradition has always tended to attach little value to home production or services. One reason may be that they do not come into the competitive market but cater only to the family group of consumers. In reality, this very fact should make them "priceless". For, since society is built upon the family, woman not only is its blologicai perpetuator but also its social stabilizer and cultural repository, and should therefore be regarded equally "priceless". But the tragedy is that, in a world dominated by pecuniary values, these nonpecuniary and non-competitive functions of the woman have always been placed at a low premium, thereby undermining the woman's entire status. Thus, while man has been recognised as an absolute economic factor, woman has continued to be regarded only as an appendage of man, thereby creating an utterly false and anti-social conception that "man supports woman", from which arise most of the prevailing features of sex inequality.

The future. society, therefore, must recognise woman also as an absolute economic factor in the home and in society, placing her on the same footing as man. This will mean that so long as capitalism survives, she will enjoy the same right to ownership of property as man; and whether she adopts an extra-domestic profession or not, she will enjoy economic independence on her own, and not be regarded as a parastie, dependent on man for her livelihood.

### RIGHTS OF WORK AND OF EDUCATION

From this must also follow the woman's right to work outside her home, the right to enter any pro-

fession of her choice, with no discrimination attached to sex, neither marriage nor motherhood, as is the case today. She should be entitled also to equal wages for similar work, for even where her output may not be the same, surely the work has involved as much time and expenditure of energy as in the case of man. The majority of women today take on extradomestic work out of compulsion; but where they do so by choice, society and the state must alike provide facilitles, for it necessarily involves a reorganization In the domestic sphere. Those who prefer to run their snug individual kitchens and parlours should be helped to do so with greater ease by bringing the mechanical labour-saving domestic gadgets within the easy reach of all incomes, to relieve the women of much drudgery. But for others, there should be community kitchens and restaurants with professional housekeepers, creches and nursery schools

The advent of women in all fields of work, greatly accelerated by the successive world-wars, is serving rapidly to break down the old frontiers of men's and women's spheres As women take on increasing responsibilities in the traditional man's world, so vice versa man is being drawn more and more into the traditional domestic world. Where a husband and wife work outside all day, it seems far more natural and logical for the two of them to come home together and share equally in the cooking and housekeeping and care of the children, than that the man should go off to a club on his own for relaxation, leaving the woman to carry the extra burden alone. Where woman makes an extra contribution to her home budget through a profession, the man must make an equal contribution by lending a hand in the home.

Although in principle the right to education extends to girls, in effect it always does not. Compulsory education must cover man and woman. In fact, education alone will give reality to throwing open of various professions and liberal arts to women. A mere absence of a technical bar is not enough, as mental and physical unfamiliarity due to lack of training prevents a large number from entering them. The present general social backwardness calls for a definite orientation on the part of society towards breaking new ground and making it the State's job to provide the necessary facilities. Special lostitutions of learning exclusively for women either In the primary stage or for specialized higher courses are not only an unnecessary material waste, but also emphasize the wide breach between the two sexes. detracting from the social value of the natural companlonship between the two. The prevailing institutions are not really co-educational in the fullest sense, for they are designed and maintained for men while women are merely permitted to attend. Men and women teachers should be equally employed in such institutions and women should have an equal share in their general management, making them real co-educational institutions where equal attention and equal status are granted to both. A natural companionship under such conditions would gréatly add to a healthier and less inhibited relationship between the sexes.

With greater elasticity and a saner economic order, it should not be necessary for any woman tn have to toll at her machine or desk eight to nine hours a day to eke out a livelihood. Our technological advancement certainly makes shorter hours suffice to earn adequate wages and ensure sufficient nutput. and leave the woman enough time and energy to attend to her home side by side. The tendency to restrict the sphere of women's work under the guise of "Special Protection" must be guarded against, and unless there is very good reason it should be avolded. For, apart from imposing an unfair limitation on their scope of employment, this "not quite adult status", as Winifred Holtby calls it, affects the entire position of woman in society. It creates a certain subtle feeling that they are not mnture or responsible enough and, like children and minors, need a helping hand; as a result, it places an insidious barrier against their assuming equal status with men in any other sphere of life. Thus, while equal wage for equal work has to be secured, the other snag of "Protection" making for inequality must be kept off, except for really valid reasons.

The entry of women into extra-domestic activities has to be welcomed, for it provides a wider field for the women's talents, cuts across the relative segregation of women as a sex, and relaxes the restrictions which at present narrow women's functions. At the same time, it adds to the general variety and therefore richness of human affairs.

As the world outside the four walls of the house is but an extension of the domestic sphere, woman has an assured and abiding place in the civic and political affairs of the country. Although in India the principle is recognised, under the existing India Act, woman's right to franchise is greatly vitiated, wifehood being made a basis for it. The only basis in keeping with our dignity and self-respect is adult franchise based on a joint electorate of men and women.

### THE NEED FOR A NEW SOCIAL MORALITY

In the social field, we are confronted by a double moral standard that completely vittates our entire social life, through customary as well as legal codes. In society, it is the prevailing custom that mainly determines its moral code. What people so often forget is that custom arises out of the needs of a particular people at n given time under certain circumstances and the moral impress is given only to ensure sanction and obedience. But if codes are for the happiness and harmony of soelety, then they must be founded on human considerations, taking into account human weaknesses and limitations and be limbued with toleration and understanding.

The new society must establish equal moral nbigations on both the sexes and lay down an Identical standard. Today, monogamy is imposed nn woman while Law permits man polygamy. This must be replaced by a law of monogamy for both. At the same time, should some grave and urgent occasion arise, provision must be made for the dissolution of marriage. And while the present law permits twn insane

or diseased people to marry without reference to anyone, all on their own, thereby doing an injury to society, it does not permit two intelligent, responsible. married people to separate, even if they are convinced that this is the best course open to them. They must resort to a court of law and often trump up false cases, since the truth will not give them what they want. The present law makes divorce so neediessly complicated-not that difficult divorces must necessarily make for happy marriages - as to force people to bring false cases or resort to Illicit relationship as in the many cases of change of religion and deliberate committing of adultery. Nor does putting all the burden of maintaining social morality on women, permitting the man laxity and licence, add to the morale of society. Surely a double-harnessed vehicle cannot progress if the yoke is only on one animal. All our laws and codes must be brought into line with this principle. If marriage is based on the deepest needs of man and is an indispensable social instrument for the proper regulation of society and not a superimposed institution, then surely its coercive character should be replaced by a spontaneous voluntary one, and divorce, instead of being treated as a disease. should be treated as a cure like a surgical operation for a deadly disease. Marriage is constituted only by mutual love, respect and obligation. Where that Is absent, such a tie cannot add to the strength or vitafity of a society. Under such circumstances, the husband has no more right to hold on to the woman than a ruling country to a colony; and when society defends such a husband, it defends not social morality thereby but the proprietary right a husband is supposed to acquire over the wife. Here is what Gandhiji says very pertinently on this question: "The peace of a household is a most desirable thing but it cannot be an end in itself. For me, the marriage state is as much of a discipline as any other . married life is intended to promote mutual good. It is also meant to serve humanity. Where one partner breaks the law of discipline, the right accrues to the other of breaking the bond. The breach here is moral, not physical. It precludes divorce. The wife or the husband separate to serve the end for which they bad united. Hinduism regards each as absolute equal of the other. No doubt a difference in practice has grown up, but so have many other evils crept in...". The most barbarle amongst these is that of purdah, where women are literally shut away in the name of social purity. It is best to quote Gandhiji again on this: "Chastity is not a hot house growth. It cannot be superimposed. It cannot be protected by the surrounding wall of purdah. It must grow from within and to be worth anything it must be capable of withstanding every unsought temptation. It must be a very poor thing that cannot stand the gaze of men. Men must be able to trust their womenfolk even as the latter are compelled to trost them".

Motherhood, the highest attribute of woman, bas, intendently and tragically enough, been turned also into a chain for her enslavement. It has made as much for her subservience as for her glory. In all

<sup>.</sup> Young India, 21,10,1926

periods from the dawn of history, the State has con-. timued to place a higher premium on her fertility than her personality. The more war-minded a government, the more heavily the pressure borne upon the woman to reproduce, and the greater the restrictions on her extra-domestic interests and activities. Equally victimised is woman for her motherhood when it is made a reason to deny her entry into professions or when she is forced to resign for the sole crime of getting married: in other words, becoming a prospective mother. Motherhood must be recognised as a service to society and not an accidental handlcap. What the State values today is not the function of motherhood in its quality but merely the physical process: hence the attempts of States to confine women's interests to their reproductive attribute which is as ili-proportioned as would be an attempt to confine a man's interest to his fatherhood. The association of motherhood with the old sense of helpless victimization by some blind cruel force and other similar unhappy associations with sex relationship, making of it a thing of fear instead of joy, must be replaced by the right of the woman to choose her own time, the ability to plan, and the freedom from the accidental element through scientific birth control. The State must provide the necessary centres for information and guidance, for no responsible authority should encourage progeny which would be a burden Instead of an asset to society and add to its social problems

This is being increasingly recognised in this Century of the Chiid, for the emphasis is once again shifting from the institutional to the individual. Society is not a piece of machinery but a cluster of individuals through whom it functions. Its status and morale is determined solely by the attainments of its constituent individuals. Therefore, the Ideal society is one which has the largest group of fully developed personalities and the least frustration or maladjusted elements. And as the flowering of this personality has to be helped by the proper environment from its very inception as an embryo, the care of the pregnant woman is all-important. The State must, irrespective of her economic status, provide the mother with the best medical care and advice at all stages of pre-natal and ante-natal periods, through well-equipped clinics, and fully trained personnel and maternity homes especially for follow-up home attendance and care. There should be provision for the maintenance of the home and integrity of family life, where the mother or the wage-earner is physically or mentally incapacitated. The working mother must be assured or adequate rest from all hard labour for these months, without fear of being victimised.

The State must realise its supreme duty to the child irrespective of the circumstance of its conception. The stigma of illegitimacy must be done away with as a relic of the dark ages and all children put on the same honourable footing.

Information on sex and general principles of eugenics should form an essential part of the young folks' education, for this ensures the right emphasis on the dignity of sex life which alone is conducive to

an intelligent, healthy, moral life. The disastrous effects of Ignorance are a daily experience, [Sex.edu-cation in its larger sense includes all ethical and social instruction that prepares young people to try to solve for themselves such problems of sex as every youth is inevitably faced with.

In the field of eugenics, the State must enunciate and carry out certain broad principles to prevent the propagation of the diseased, arranging for free treatment where the complaint is curable and for isolation where necessary.

#### WOMAN'S STATUS IN THE FUTURE

In conclusion, one may say that the reotientation of the woman's status in the future society should proceed by the recognition of the basic principle of equality of status of man and woman in the civic, economic and political life so as to give woman a complete individuality, and by the conceding of the following fundamental rights to the woman to ensure this status:

- (1) The right to an identical moral standard.
- (2) The right of franchise on equal basis.
- (3) The right to education.
- (4) Equality of rights in the marriage obligations.
- (5) The right to property as long as capitalism exists.
- (6) The right of entry to all fields and professions of work.
- (7) Equal wage for equal work.
- (8) The right to health—care and protection of motherhood, stabilization and integrity of the home and family through State aid when and where necessary.

The purpose of these demands is not to reduce all men and women to the same standardised pattern, but on the contrary to add to the richness and variety of life, to enable us to respect and appreciate each individual as an individual irrespective of sex and love and honour the best and the noblest the human personality has to offer, without prejudice from the accident of the body. Thus, ability rather than a sort of a pre-determined tradition will naturally be allowed to stamp the individual's vocation. A society where such a change is brought about should provide an undreamed-of wealth of personalities and a greater social solidarity and equilibrium impossible in the society of today with its narrow prejudices, taboos, inhibitions and conflicts.

Once the fundamental rights of the woman are recognized, in practice and reality more than in theory, a new woman will come into society, a woman who is a healthy and efficient asset of human progress and civilization. Then she will perform her fourfold mission as housekeeper, mother, worker and eithen with a new dignity that equality and status and recognition give. Her personality will give a new dignity to human civilization itself.

## NUTRITION

### K. S. MHASKAR

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In his criticle, Dr. K. S. Massher discusses the qualitative aspect of the problem of food in India. He points out the constructive part which a believed and nutritive diet plays in building up the physical and mental health of a people and shows by altable and velerant statistical information how different countries have stood to gain by profitable experiments in nutritive dists. He has also given practical and useful suffering for studying the nature of both protection and vitenamial foots for the masses. As a champion of Physical Education, as a social worker of a high order, and as a reputed medical practitioner of very long standing. Dr. Massher shows great stincerty and connections in a case of vital importance.

HERE is indeed at the present moment no more important thing than the question of the proper feeding of the nation and there is no greater need than the enlightenment in the problem of nutrition." Thus wrote Sir Robert McCarrison more than twenty years ago and it is still true to this day.

Brillat-Savarian's epigram that "the fate of nations is determined by their food" was realized in the last War and after, and has been realised to-day in the close inter-relation of the two "V's"—Vitamins and Victory. Food can increase both efficiency and the power of resistence. Our mental vigour is largely dependent on our bodily fitness which in turn is greatly influenced by the food we eat. The problem of nutrition, however, is not very simple.

The Indian is at present, on the average, an under-nourished individual. The nutrition surveys that have been made so far, tend to show not only under-nutrition, but also mal-nutrition. The averages of the diets previous to the War cannot, therefore, be taken as standards for future guidance.

Fortunately, the recent catastrophe has caused a gradual awakening from the complacency in which the Indian had fallen,—the facile notion that in matters of food there was notiting new for him to learn, provided a sufficient quantity of it was made available to him. He is just beginning to grasp the dietettic values of food-stuffs and to realize the distinction between mal-nutrition and under-nutrition.

### NUTRITION Vs. DISEASE

The Science of Nitrition has advanced considerably during the last wenty-five years and the influence of "accessory or protective foods" on health and sickness is now better appreciated. The whole world now realizes the importance of this new knowledge of Vitamins and recognises that food has both a biological and an energy value. Mal-nutrition

is not an individual incident, but may affect the population as a whole and may endanger the health of generations to come; it affects physique and may harm character and intellect as well.

Three groups of diseases attained virulence after the last War: Infectious Diseases, Kidney troubles, and Mainutrition. The pandemic of Influenza (1920) took perhaps the heaviest toll in the history of the world. Only recently has the connection been made out between Infectious Diseases and immunity or the defensive mechanism of the body originated by Vitamins and mineral content of the tissues. The role played by sugar in neutralising the toxins of bacteria, building up antitoxins and helping to save lives otherwise despaired of, is now realised. The knowledge of the intimate relation between the utilization of Vitamins B & C and the production of adrenal hormone, has helped to maintain vascular tone and ward off collapse in severe infections. Infantile paralysis has lost its terrors since the increase in knowledge of the use of sugars, calcium and Vitamin "B".

The importance of good food and nutrition in the prevention of infectious diseases is evident from the fact that constant supply of vitamins affords in the long run a protection against all kinds of germs; they also generate an adequate quantity of harmones or secretions from internal glands to keep the body in perfect health.

Kidney affections are only a consequence of the various infectious diseases and require therefore no special consideration. Mainutrition Oedema is but a disguised form of beri-beri or anaemia and can, like constipation, be controlled by accessory foods.

### UNDERFEEDING AND FOOD DEFICIT

The fact that India is an underfed country has been stressed of late, time after time, both by Government and public spokesmen. Sir John Megaw pointed out (1944) that "only 30 per cent of our population is adequately nourished. The existing supply of food grains gives only about 18 ozs, of cereals and pulses per adult per day which ought to be supplemented by 1½ oz. of oils and butter, 10 ozs, of vegetables and fruits, and 8 ozs. of milk to provide adequate nutrion. Actually an adult gets only 40 per cent of these protective foods." At one time, even as late as 1881, it was a land of plenty flowing with milk and honey and had a surplus of five million tons for export; but with the gradual increase in population, the position has changed in this century, so that India has now to import 1.5 million tons of rice annually to supplement its normal food production of 51.5 million tons.

While food production has remained almost stationary on the whole, the population has increased by nearly 55 per cent during the last sixty years (1881-1941) and will increase by another 15 per cent during the next 15 years. The existing shortage of food articles will not only have to be made good, but will have to be supplemented by another 15 millions of tons of foodstuffs, if the average individual foodsupply is to remain even what It is to-day.

All parts of India are not equal food-producers. While parts of the Punjab are called the granary of India, the five Provinces (Bombay, Madras, Bengal, Travancore and Cochin) import 2.1 million tons in rice and wheat annually. This deficit is made available through the surplus efforts of 55 million cultivators, who normally ive on a very meagre standard of nutrition. This in itself is indeed a very serious problem and becomes more alarming if the future increase in population is to be taken into consideration.

The "Grow More Food" campaign started by Government was an utter surprise to many in 1942, as they considered it quite uncalled for and likely to create panic. The control of prices caused much early alarm and disappearance of food gralos from the urban markets. But it was a move in a wise direction and saved a great part of India from the catastrophe experienced only lately by Bengal.

Other countries are already looking forward to getting their food requirements supplied in part by

India. India should not therefore expect any outsidehelp and must make every attempt to make good its shortage. Besides, even if India can import food, what can it offer in return for this food supplied by other countries?

There are two ways of making good our food deficit: (1) by bringing more land under cultivation and (2) by making better use of the land already cuitivated. Out of a gross total of 655 million acres of land, less than half (282 million acres) is under the plough. The rest cannot be brought under cultivation, because of scanty rainfall, difficulties of cultivation and prevalence of endemic diseases like Maiaria. These iands await capital and enterprise for their development. The first need is that of water, the next that of improved seed, manure and labour. If another 125 million acres are thus brought under irrigation during the next 15 years, they might provide a little more improved standard of nutrition, though never of the type which England and America are at present providing their people with. There are only 63.6 million acres under irrigation at present. Even for an unbalanced but sufficient calorie diet, an increase of 200 per cent is necessary and would be more so if a balanced diet is aimed at.

The task before the whole country is stupendous. Every province must try to produce the quantity of food it requires to find out what maximum effort it can make in this matter. In case it is incapable of feeding itself adequately it has to find out what kind of cash-crops or industrial articles it can offer in exchange of food to other provinces. Bombay Presidency is even normally a deficit province in matters of food and has to import 7 to 8 hundred thousand tons of food grains annually of which 450 thousand tons are in rice alone.

The following table summarises the position of deficit in food-stuffs which mainly occurs in cereals and pulses. The Galorie Value of the daily diet of an adult agriculturist is today about 4,200 calories. If it is to be further supplemented by protective foods like milk (12 ors.), fruits and vegetables (8 ors.), the cost of food and the quantities of food-stuffs required would be much higher.

134 "

Statement showing shortage of food in Bombay (1941)- Present - Diet.

Population.	1	Rate of consumtion per adult unit per day,	In Units of 000 tons			
	Type of Food.		Actual requirements per year.	Actual production per year average for 10 years.	Shortage.	
1	2	3		5	6	
20,800,000	Cereals	25}	4,066	3,333	) 411 Rice 235 Wheat.	
	Pulses	31	517	480	J 54 Millets 67	
Adult Unit 15,600,000	Vegetablea Prusts	14 2 14 44 18	225 300 2.8 700 200	228 300 228 700 290	Actual prod supposed to ample.	

Prom Rao Babadur N. S. Joshi's Book "Food and Irrigation"

Ground-nut cake is used mainly for manure at present. If this is advocated as food (1½ oz. per day), its cultivation will have to be considerably increased by about 230 thousand tons. It contains 50 per-cent good protein and 35 per cent of digestible carbohydrates. It would prove a valuable supplement to the diet in coastal areas where rice is the stanle food.

Fish is another Item of food which has not yet been properly explored in spite of the extensive seaboard round India and would form a valuable addition to the existing animal foods in areas distant from the coast.

The question of supply of milk cannot be solved by merely making a paper calculation. Good milchcows require almost as good nutrition as human beings. It would be uneconomical to increase the number of cows for the milk needed and feed them on unsubstantial dry grass and fodder as at present. More cows mean also production of more food.

Every planning must also take account of the scoting of famines. Half of Bombay's total area (the eastern half) is liable to famine or scarcity. This is a sudden shortage not sufficiently known advance and provision will have to be made if the health of the population is to be maintained and pestilences to be warded off.

Plentiful and continuous supply of water is the keynote of prosperous agriculture. If this is properly planned by means of irrigation canals, wells and storage tanks, it will not be difficult for Bombay to supply its own needs of nutrificus food even for 30 years to come, inspite of the expected normal increase in population.

### FOOD REQUIREMENTS

The Committee of the League of Nations recommended (1938) 2,400 calories per day for an adult and additional calories for every hour of work according to its heaviness; they also recommended that the diet should be varied and should contain a sufficiency of protective foods, that milk should be a conspicuous element in the diet at all ages and that one gram of protein, partly of aulmal origin should be taken per kilogram of the body weight. The American Committee, however, recommended standards of adequacy of Vitamins A, B & C three times those of the League of Nations in order to safeguard the health of the Individual.

All these are excellent data to be guided by, and the Health Bulletin No. 23 of the Government of India embodies them in a form which is now common knowledge among the educated classes. The present need of the body is not only the supply of a sufficiency of energy giving foods, but of foods termed "protective" which have some biological value to enable growth and repair, in addition to their Vitamin and milareal content, required to give protection and regulate the body-functions.

Protective foods enable every person, young and old, to obtain full physical and mental development and to increase resistence to many diseases e.g. scurvy, berl-berl, rickets, tooth-decay, anaemia, nightblindness, and such secondary diseases like tuberculosis and broncho-pneumonia which often follow measies and whooping-cough in the case of children. The present Intake of milk, meat, fish, vegetables and fruit is generally insufficient in India.

The importance of milk as a protective food needs no emphasis in these days of scarcity where the average is said to be about two ounces per person; even this average is so unequally divided that most of the poor often go without it throughout their life. Milk has been proved to rank first in all food articles in matters of growth, nutrition and vigour.

The importance and indispensability of vegetables in our diet is fourfold on account of the proteins, minerals, vitamins and alkalinising effect they possess Their nutritional value depends on the fertilizer used and their cooking. An under-nourished system cannot make proper use of them; vitamins and minerals are essential not only for physical wellbeing but also for vigour of mind. Authenticated claims have been made for Vitamin "B" as a cure for certain types of defective memory, absent-miniedeness and in decision, and its lack is said to cause moddiness, fear, indifference, sluggishness, and mental and physical fattigue.

Minerals are often termed inorganic vitamins, as even traces of some of them are essential for the well-being of the organism. Potassum and Calcium saits are the most powerful activitors of tissues. The influence of mineral balance on metabolic processes is indeed far-reaching and requires more study. Incorrect methods of preparation and cooking may unknowingly eliminate both minerals and vitamins.

Agricultural products owe their food value and mineral content to the manuring of the soil and demand more attention to prevent their deterioration. Since the introduction of artificial fertilizers, however, there is a growing tendency to sacrifice both flavour and multitive value in favour of size and appearance. The production of giant crops and glant fruits means sometimes a serious loss of nourishment and a poor supply of calories, and this applies to cattle fodder as much as to directly ethile human food, as its determines the quality of milk and meat produced.

Soya beans gained much popularity in Germany where Dr. M. Cohn succeeded in evolving a cheap and simple means of removing their bitterness. Their value lies in the large amount of glutaminic acid they contain. The Swiss blochemist Richistein produced from it a synthetic adrenal-cortex hormone useful for keeping up the tone of muscles. It has not been found so successful in India as in Germany, where they boasted that their easy conquests of Poland, Netherlands and France were due to this palatable and concentrated food material.

Balanced diet is like harmony in music; it is a question of combining the various elements of a diet into a balanced whole. The selection of kinds of food depends on local factors, climate, habits of life and environment. Another important factor is the effect of the mind on appetite and digestion. Any attempt, therefore, to change the popular diet or the

methods of preparation would, from the psychoiogical points of view be attended with difficulties and will require intensive educational propaganda.

### DIETETICS AND NUTRITION

The study of Dietetics has revolutionised our ideas of the effects of various foods on the human organism. The Greek word Dialita has a far wider meaning and covers the habits, methods and order of life. Dietetics is, therefore the art and science of healthy living and concerns itself not only with food and nutrition but also with the supply of water, air, light and the bodily processes of elimination of waste.

The improvement in vitality and physique during the last century is the result of the growth of economic welfare, both individual and national, and important advances in sanitation and medical knowledge. Social conditions such as housing, clothing, cleanliness, nutrition and education, even of the lower income groups, have gradually improved; and the agricultural and industrial revolutions have increased the supplies of commodities of all kinds, particularly food. The development of the science of nutrition threw more light on the relation between duct and health The effect of deterioration in diet was strikingly shown during the last world-war by increase in the general death-rate, specially that from tuberculosis and by its effect on children.

The discoveries that led to our cures for sourcy, ber-ber, tickets, pellagra, give us but a gilmpse of the immense possibilities that offer themselves for ruising the standard of health and preventing illness through foot.

The study of vital statistics also discloses the differences between the mortality rates of different countries and between the richer and poorer districts of the same country. If our Government would try to provide adequate levels of food consumption. equally spectacular progress can be made in the saving of human life and in improving its physique. National expenditure on hospitals will be reduced and improvement in heaith will be accompanied by increased efficiency and rise in material welfare and happiness. Nutrition has already been shown to infinence infectious diseases and epidemics. Abnormal conditions call for abnormal measures which must conform to the highest standards of knowledge available at present. The gravest dangers that face us are mainutrition and infectious diseases

The population of India Is likely to increase even raster as public health and nutrition improve and the present high mortality diminishes. All future planning depends on the size and age-distribution of the population at the dates concerned. The urgency of national development is apparent in regard to food and agriculture, but every improvement in health and nutrition must be accompanied by corresponding effort to educate the people, particularly the women, to some sense of responsibility in reproduction.

### DIETARY POLICY

This should be developed from two points of view: Government's responsibility and private enter-

prise. Many, but still scattered attempts, are being made by private industries, schools, and boarding establishments, to provide meals either wholly or in part; these authorities should be educated to recognise their responsibility in providing food or diets adequate in all nutrient constituents.

Improvements in Dietetics means a stimulus to deproduction of food articles, i.e. to agriculture, dairy products, fishing etc. Some of these articles are of a perishable nature and cannot, therefore, be transported to long distances; this will mean stimulus to domestic agriculture and dairy products.

Cereals, i.e. the energy-bearing foods, form, however, the basis of every diet and should not be allowed to exceed 50 per cent of the total calories of food; these articles are always available for export and are thus an extra source of income to the farmers.

Measures for the prevention of Malnutrition in chidihood deserve special consideration. Faulty feeding in pre-adult periods of life often causes damage to health, which is difficult to repair in later life. All attempts, therefore, to improve nutrition in Maternity and Child Welfare Centres and in Schools should be encouraged and fostered. The nutritive properties of milk can never be overestimated. Its value is unique to infants, children, adolescents, and expectant and nursing mothers, as it contains substances essential for vitality and growth It is a complete food. That is why all education campaigns or welfare schemes include in their activities the free or cheap distribution of safe milk to children of school-going or pre-school age.

The question of providing free or cheap meals to school children during school hours might be considered an extravagant one in India. But several countries have done it with remarkable results. Another useful line of inquiry and propaganda is the provision of correct meals to children in boarding schools where the diet is often seriously defective. Wherever meals are provided for children, the necessity of preparing them in accordance with the principles of nutrition should always be emphasized.

### NUTRITION POLICY

Nutrition is the process by which the food consumed by the body is utilised for its growth and maintenance and for the provision of energy required for external activities of the organs. Nutrition and the expenditure of energy are the first concern of dietetics. The psychological side of the subject requires the observation of customary diet, individual prejudices, vagaries of appetite, perverse tastes and dietary inhibitions.

Nutrition is no longer an exclusively physiological problem but is a matter of concern both to public health officers and economists. The International Labour Conference (1938) emphasised that "Large numbers of the working population not only in impoverished or depressed areas, but in the most advanced countries, are inadequately nourished. Such mainourishment and under-nourishment is found even in many employed workers in times of normal business activity."

The problem of nutrition varies widely in different parts of India; while in some places a majority can afford adequate diet, while in others a great majority obtains but a bare subsistence; and in many places the food prices are high in relation to income. A national nutrition policy should aim at ensuring all sections of the population a diet sufficient enough to include energy-bearing and protective foods for optimum health and must be based on periodical inquiries into food consumption habits, "Recent evidence shows that thousands of people are suffering from inadequate physical development, as a result of insufficient purchasing power, imperfect distribution of food substances, maintenance of food prices at higher levels and ignorance of biological values of food. The existence of such a situation, in a country where agricultural resources are ilmitiess. calls for constructive statesmanship and mutual cooperation."

Better nutrition has in the past been the result of a search for better and more abundant life. This ought to be now the deliberate aim of the nutrition policy. It must bring within the reach of all sections of the community all those foods which modern physiciogy indicates as essential for health and physical development. Increased demand requires changes in the methods of supply, which will in turn require the adaptation of agriculture and commerce to suit these ends. It is necessary to study the influence of the nutrition problem on agricultural production, the division of erons, the feeding of the peasant classes and the supplying of markets. Further, it is the duty of public authorities and Government to assume the responsibilities inherent in a nutrition policy and to apply them in such a manner as to combat mainutrition and promote public health and at the same time to benefit agriculture by increasing the consumption of the so-called Productive Foods.

### FOOD PRICES

The consideration of the relationship of food interests o income levels requires the balancing of the interests of the consumer and the domestic producer. Production of food and its supply is dependent on the price the producer can obtain and whether it be in conformity with the standard of his living and whether the purchaser can afford to pay that price consistently with his income.

There is often great discrepancy between the seifing price at the farm and the price at retail, which is influenced by transport and distribution charges and octroi taxes. The perishable nature of these food-stuffs requires adequate and quick transport at iow rates. Only a co-operative movement can succeed in keeping the retail cost low.

Measures to raise the level of income in lower mome groups should also form a part of the nutrition policy. Minimum wages should be fixed and assured to the persons by legislation. Health insurance, unemployment schemes, family allowances

in case of large families, maternity benefits and such other social legislations play an important role in the protection and improvement of the health of the people.

The orientation into a new policy requires careful study of the elasticity of demand. The demand for protective foods cannot be effectively increased unless the demand for energy-bearing foods is properly satisfied and the price is well within the income level. The greatest benefit of these changes in policy would be to improve the nutrition of the agriculturist himself and teach him to use more of dairy produce, fruits and vegetables in his dietary. There has been some adaptation to the new needs, but there must be some policy behind it all, to permit of steady expansion. This requires capital and a study of agricultural credit and agricultural indebtedness.

Agricultural co-operation has done much in the past and requires continued encouragement. Education in improvement of methods, joint use of machinery, easy supply of food seeds and manurcs, enriching effect of animal husbandry on soil, information of marketing conditions and education of the farmers have to be provided. They must be educated to grow more of protective foods at least for their own use.

### EDUCATION IN FOOD MATTERS

The nature of food partaken depends on the amount of the income at the disposal of the family and on the intelligent use made of that income to meet the food requirements. Education can achieve much when incomes are adequate; and even in the lower income groups, dietary habits can be impraved through educational propaganda. It is necessary, therefore, to educate all such persons as school-teachers and social workers, who are in a position to influence food-habits and administer social aid. Minimum nutritional needs of different age-groups and alternative sources from which different nutrient foods can be obtained, have to be explained and every opportunity has to be taken to point out the relation of ill health and bad physique to inadequate food.

Adequate nutrition is not the only factor that requires consideration in matters of health. Propaganda is also necessary to emphasise the necessity of good housing conditions, fresh air, sunshine, exercise and hygtente habits on the development of health. The importance of education of the public cannot be too strongly emphasised. Every method, be it that of posters, pamphlets, bulletins, press articles, films, radio talks, demonstrations, exhibitions and museums should be tried and instruction about nutrition should be included in adult education courses. Diet and food hygiene should be incorporated in the curriculum of all school studies.

Nutritional information must be adapted to the habits and resources of particular groups of people so that they could use it for their betterment. Education must be practical and suited to all classes of the population, to labourers, rural and urban, as well as the salarted classes. It should include advice on alternative diets in terms of food substances available.

on the preparation of diverse menus within the limited range of different incomes and should be capable of arousing interest in child and family welfare.

Attempts should likewise be made for the production of foods on co-operative lines and the organisation of garden allotments. Every farmer should at least learn to produce as much of protective foods as may be necessary for his needs.

The question of free distribution of certain foods like milk or lunches to school children, or of selling the protective foods like milk at a subsidised rate requires closer scrutiny and an adjustment for different income levels. Mainutrition is often most prevalent in families whose income is lowest and it is these very persons who require confinued reliet.

### NUTRITION COMMITTEE

The League of Nations recommended the formation of a National Nutrition Committee to organise and co-ordinate nutrition work in a nation. This Committee is expected (1) to collect information regarding nutrition problems and to determine their limitations and defects, to find out the foods and the amounts consumed and the distribution of this consumption among individual men, women and children of all sorts and conditions, (2) to indicate, on the basis of this research, the changes that are destrable in the nation's diet, and (3) to foster the health of the rising generation and to publish, from time to time, sound propaganda and advice for the correction of faulty diets and methods of cooking and to rectify both physical and nutritional defects.

The Committee is also expected to pay special attention to social aspects of maintrition, the food-consumption habits and economic resources of various peoples, their nutritional requirements, the nutritive values of different foods and should publish from time to time periodic surveys of its nutrition policy.

### THE ALL-INDIA FOOD CONFERENCE

The Indian Mcdical Research Association and Sir Robert McCarrison had recognised the importance of the subject of nutrition long before the League of Nations did.

Since then, the study of nutrition in India has progressed and it has now been recognised as a

national problem. Government of India have gone a step further and have taken the public into confidence. They call an All-India Food Conference from time to time to advise them on Nutritional matters and to devise means to better the situation by means of short-term and ions-term programmes.

The fifth Conference (Jan.-Feb. 1945) decided to carry out the following msasures:

- (1) to give vigorous push to the Grow More Food Campaign by (a) assuring the cultivator fair price for their food grains, (b) undertaking measures to increase the production of milk, eggs, fish, vegetables and fruits, (c) encouraging the growing of vegetables in all vacant plots even in villages and schools, (d) encouraging the use of better manure and fertilizers, (e) supplying materials for seed and manure deposits, and implements like tractors, pumps and cold storage and (f) encouraging the expansion of live-stock production;
- (2) to better the nutrition by undertaking (a) diet surveys and removal of diet defects, (b) measures to provide protective foods and milk to people e.g. mothers and children who most need it, and (c) to popularise alternative foods to make up the diet deficiencies;
- (3) to develop the milk supply by (a) establishing large dairy farms, (b) salvaging dry cows and buffaloes, (c) facilitating the movement of milch cows. Bombay is the first City to take the lead in subsiding milk to mothers and children;
- (4) to encourage poultry farms and fish culture; and
- (5) to provide extra food to manual workers through cooked-food canteens.

They are thus trying to close the gaps between the nutritional needs of the people and the foods available. Every cloud has a silver lining. The War brought untold miseries to the people; but with the coming of peace, there are better chances now of Sir Robert McCarrison's desire gaining fruition than ever during the last twenty-flue years.

# THE RADIO AND SOCIAL WELFARE IN FUTURE INDIA

### Y. A. FAZALBHOY

Y. A. Pazulbboy is a Director of Pazulbboy Limited and of several other leading business concerns. Member of the British Fibu Institute, he has made a deep study of the development of Radio and Fibundardy in India and has expert experience in basiness corporation. In 1933 he facted South South States (Fida) Ltd., which established "Pilu City" Studio. Later he underlook a north lone for special study of Radio and Pilup-noduction and state his relain has some made in promoting the disciplination of British and Pilup-noduction and state his relain has some made in promoting the disciplination of British and Pilup-noduction and state his relain has some made. In promoting the disciplination of British and Pilup-noduction and state his relation of the British and Pilup-noduction and state his relation of the British and Pilup British and Pilup-noduction and state his relation of the British and Pilup-noduction and state his relation of the British and Pilup-noduction and the British and Pilup-noduction and the British and Pilup-noduction and British and Pilup-noduction and British and Pilup-noduction and British and Pilup-noduction and British and Pilup-noduction and British and Pilup-noduction and British and Briti

Mr. Y. A. Fazulbhoy, in this thought-provoking article, describes the great Electronic type when Idectionis will revolution on andustry and our whole life. Radio is a powerful instrument of Electronics. Mr. Fozulbhoy makes and a stoony case for its immediate development in Indian int will immensely help to rate the standard of the ing of the people. But the process of Radio can be violently observed as in Germany. To good against has larger and also to explore the east possibilities for Radio in India, he interests the urgent necessity of planning Radio-Development. He must so outlining a unational policy in Radio-Planning and obove all, on establishing a beople's Radio Mr. Establishing's were smay week over some dearly of some other Diay Sirify they folias.

### THE ELECTRONIC AGE

NDIA is on the march to a new destuny. For great things are coming in radio in our country. We will harness the modern electron to our ancient civilisation. "Electrons", it has been said", \* "are the mighty midgets that will reshape your life tomorrow. Our electrons are neatly caged inside glass or metal tubes, like the genie in Aliadin's lamp. And, like Aliaddin's genie, they have the power to serve us in a thousand useful ways.

"Those faintly glowing silvered butbs inside your and not look impressive. Yet they take a feeble, imperceptible radio signal and multiply it more than a billion times. That gives you some idea of the wonders caged electrons can perform.

"Electronic devices are likely to perform more and more tasks in factory, store and office. An electric eye will read blueprints and faithfully reproduce them in metal. A vending machine will wrap packages and make its own change. An electronic book-keeping device will keep your accounts and avoid errors.

"Yet, for every job they take away, electron tubes can be counted on to conjure up several new ones.

"Here are just a few of the electronic developments you and I have learned to take for granted: X-ray tubes, talking pictures, ultra-violet lamps, public-address systems, neon signs, 'tever' machines, burglar alarms and luminescent lighting. The photographs of far-away battlefields in your morning paper are usually raddeed across the ocean. An electronic eye levels your elevator; another opens railway-station doors when your hands are full of lugsage.

"Electron tubes sort oranges, fill bottles, dry paint, pasteurize milk, dehydrate eggs, copy maps, ald the hard of hearing, frisk suspects for concealed weapons, and keep careless fingers from being mangied by machines. When darkness falls, electron tubes can turn on street lights.

"Some electronic devices have sharpened all five human senses. With this one you can hear a butterfly stamp its foot. With that one you can stand on the outskirts of a crowd, pick out any individual among the thousands present, and eavesdrop on what he's saying. Here's a phototube so sensitive it distinguishes all different shades of colour. Here's a gadget that feels variations of 1/10,000 of an inch in the thickness of a copper wire; another that will taste one drop of vinegar in a vat or water; and a third that can smell the smoke of a single pocket match inside a giant warehouse.

<sup>•</sup> From a speech by General David Sarnoff, President of the Radio Corporation of America.

"I have watched an electronic circuit measure speed of bullets whizzing from a gun. I have seen another instrument probe electronic fingers deep into the earth and unerringiy locate hidden oil denosits."

The use of Electronics has produced a revolution in industry and life in Europe and America. When it is harnessed in such a vast country as India, it will open up immense possibilities of progress.

### RADIO AND THE LIFE OF THE INDIAN PEOPLE

The great instrument of Electronics is radio. Radio will help our people grow more grain, raise more cotton, produce more raw materials and manufactured articles, rear healthler families, live in better happler homes.

Naturally, radio alone cannot achieve all these thugs. The coming 15 years will see many individuals and many industries contributing to the broader security of India. Radio will help to bind these individuals and industries together, so that their achievements will flow from one to the other, and their usefulness multiply. In India during the next 15 years, radio will outstrip any predictions made for it today.

When we look back to 1930 and see what predictions we then made for radio in the past 15 years we find how far short they fell in assessing the vast possibilities of this science. India recognizes that great possibilities lie ahead off its radio industry. Today, India has only 180,000 radio sets. It should have—and will have —millions of radios in the homes, and factories and villages.

The art of broadcasting in India will be a service co-ordinated with every branch of progressive government, assisting our farmers, our schools, our factories, our families. Based on our already sound foundation the service of Indian radio broadcasting will grow, with state and nationwide services especially created for our social, religious and economic life. Lake the motion picture, radio will be a powerful system of education and information, tuned to the modern needs of modern India.

Culturally, as well as economically, radio is a great basic need of India; for the increase of employment, for better crops, better homes, better schools and healthier families. Radio is not a luxury, it is a fundamental tool and necessity. It is a fruitful help for a fruitful india.

In Europe and in the U.S.A. radio reached a high standard of development and reaching that height it was extremely helpful in promoting social welfare. But on the other hand, it was open to the worst abuse. Halled as a most potent force of propaganda by politiclans, it paved the way to the growth and development of violent ideologies that overpowered Germany, Italy and Japan and brought about the recent world war. In the hands of Hitter and Mussolini, it became socially destructive. In the light of these consequences, we have to learn the lesson that

ali efforts should be made to plan the development of radio on the right lines. Only then can it promote social welfare to the highest degree.

### RADIO AND INDUSTRIAL PROGRESS

India has the opportunity for a comparativelyresis start in radio. It should be possible to avoid many painful transition stages in the coming 15 years, and to take advantage of the developments in engineering and in broadcasting and communication technique which have come out of the recent war.

India's radio industry will grow hand in hand with the electrical industry in general, and with the streamlining of our power industry. It will also grow with our transportation industry. Railroads, highways and air transport companies will utilize radio. Each field will help the other.

Radio in India is a great potential source of employment. Already, several radio manufacturing and assembling factories have been started for the total or partial manufacture of radio sets. This, in itself, represents a pool of employment. In addition, we will need technicians for the installation and service of radio equipment, for sales, advertising, transportation and other fields which will tie up with the growth of radio.

We must make radio sets at price levels to insure a wide distribution throughout India. At the same time we must recognize that our climatic conditions make stern demands on all types of radio equipment and that we cannot sacrifice performance for price. The industry, I am sure, will insist on the proper standards.

Over and above the field of broadcasting, there is another distinct branch of radio, — point to point to munication, which will enhance the economic and cultural development of India. This is the great field of internal communication by radio, a service already advanced in India, but which has an ever more brilliant future. As the needs of this field expand, the need for trained personnel will grow. Here again, radio will make a distinct contribution through the skill of India-trained men.

Dr. C. B. Joillife, Vice-President in charge of RCA Laboratories at Princeton, N.J. U.S.A. sees in television 'a second revolution' which can affect our mode of living to an even greater degree than radio broadcasting. Many industries will spring up to fit the needs of the mother industry, television. Our film industry will be a contributing factor to the growth of television. Our studios will produce for television programme. Our theatres, too, will take advantage of the possibilities of television.

It is not fantastic to imagine long telephone and telegraph lines being replaced by lines of towers spaced 25 to 40 miles apart with small automatic radio transmitters and receivers carrying many messages simultaneously through the ether from one part of the country to another. A single communications channel may carry telegraph, telephone, and

television messages or programmes simultaneously with less maintenance or service than simple wire lines.

### THE NEED OF A PLAN

The world is ready for and needs new industries. This is the same condition as existed at the end of World War I. What then can come out of the end of world war II for peace-time use? Radio engineers should think and plan seriously concerning that use. The instrumentalities which have been developed for war purposes can result in very large industries in peace or they can fizzle out into slowly developing and inconsequential industries.

In the light of the extensive use and development of radio in Europe and the U.S.A. how would India plan radio development in the near future? It is obvious that there is an incomparable field for development in such a vast country, almost a subcontinent, as India.

India lives in her hundreds of villages and so the planning of radio in this country must envisage an extensive net-work of transmitting stations from one end of the country to the other.

Unfortunately, three-fourths of our people are illiterate and so through the word of radio the people in the villages can awake to the message of sanitation, health and medicai relief. For providing such necessary and effective education, we shall have to plan either to take over from Europe more and more radios year after year or to start manufacture of radio sets in India. Our plan should, therefore, start with the programme of more radios and more transmittine stations all over the country.

But for this purpose, our country needs a People's Radio, free to debate and discuss the major problems and issues that face the nation and free to help national enterprise through commercial propaganda.

For guiding such a free instrument of radio, we may establish in time to come an all-India Council for Radio Development, having representatives who will voice the ideals and aspirations of the Indian masses.

There is considerable scope for nationwide development in radio and broadcasting, particularly in relation to the manufacture of receiving sets, and establishment of a network of transmitting stations, and the industry offers a valuable source of employment, in the present post-war period, especially to the demobilised war personnel.

Broadcasting has a big role to play in instructional propaganda which in turn is closely linked with plans for social and economic development.

In devising a network of viliage radios for India two considerations are being kept in mind. In the first place the service should be cheap in consonance with the country's conomic standards. Secondly, in the preliminary stage radio should reach the more accessible of the widely scattered rural areas.

India's peasant population is scattered over 700,000 villages. Of these rural units nearly 600,000 are

mere hamlets each with a population below 1,000, and comprising a total of 181,000,000 people. Villages with a population ranging from 1,000 to 5,000 number some 80,000 containing roughly 143,000,000 persons. Translate these figures into terms of receivers and you are confronted with a pretty problem. Is it preferable to reach 143,000,000 people through 80,000 receivers or would you rather expend money on nearly 500,000 more receivers to reach only an additional 38,000,000? It is here that the element of accessibility comes in. And to this question there is obviously only one-practical answer.

The other consideration is cheapness. In a poor country like India, the most acceptable radio service is one that is easily receivable on cheap sets. Though plans have by no means matured, those in authority incline towards popularising medium-wave rather than short-wave transmission. Medium-wave receivers cost roughly one-fourth the price of short-wave sets. Apart from economy there is the practical consideration that the short-wave band is overcrowded. As a result of the war, radio equipment has been revolutionised and work on new types of transmitters is reported to be making good progress. A network of programme points relaying broadcasts to receiving points with separate transmitters for urban and rural programmes is visualised. High quality telephone wires linking the separate twin transmitters in each regional area will enable simultaneous broadcast of dual programmes. The pian which, to repeat, is still at a tentative stage is fashioned partly on the Soviet modei.

Official figures on the number of Russian stations are not available but competent estimates place it at 500 to 700. Considering that India today has for internal purposes only nine stations - four of them short-wave-with 14 transmitters, the leeway to be made up is prodigious. Calculated in terms of equipment, personnel and finance, it represents a colossai total. Whether a considerable proportion of the cost can be met out of local contributions collected through district boards is problematic. Other sources may have to be tapped. For those who grudge this expenditure a few comparative figures may be quoted. Before the war the BBC controlled one central and 13 regional stations. How many people realise that the yearly cost of running a single one of these regional stations was more than the annual peace-time expenditure on the whole of All-India Radio?

Broadcasting is bound to play an increasingly important part in the development and popularisation of post-war India. The war gave a tremendous stimulus to external broadcasts from this country and Delhi's two 100-KW short-wave transmitters are capable of radioing right round the earth. They reach out north-cast to Japan, south-cast to Malaya and beyond, north-west to the British Isles, and Europe, south-west to South Africa, Madagascar and Mauritius and near home to the countries east and west of India. In the future what fruitful poten-

tialities for projecting India abroad this vast radio domain offers?

INTERNATIONAL AND CULTURAL ASPECTS OF RADIO

There is another important aspect of radio in india, and that is the international aspect. The modern nation is articulate. It speaks by radio to the other nations of the world. Powerful short-wave transmitters are part of the new technique of information, together with the rebroadcast of programmes in other lands.

Just as we must show the beauties of India, its products and its peoples by films to the other countries of the world, so we must give the world through radio an understanding of our plans and our hopes,

Foreign relations, as our leaders well understand, are not static but fluid and dynamic and they require the use of radio on a sustained basis. India, fifteen years from now, will be sending as well as receiving a wide range of short-wave programmes in many languages.

The war gave us a new appreciation of the value of international exchange of news and opinion. Our international as well as domestle radio will develop in the interests of a more fruitful India and an India that is properly understood outside of her borders.



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# E OF TOMORROW

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Culture Organized by K. D. Seihna, B. A. (Bom.) Author and Journalist, Bombay.

# GENERAL REFLECTIONS

### K. D. SETHNA

Mr. K. D. Sethua, B.A. (Bombay) with Philosophy Honours and the Ellis Prize in English, is both a poet and a prose writer whose work has been appreciatively noted by competent critics. His studied for cight years at close quarters the spiritual and entimal activity of 5th Annobiado and has kept in lining touch with the various trends of Culture in India and abroad. He published some of his poems in 1911 under the title 'The Secret Spiendour'. His interary and philosophical essays, which have appeared in several journals, are soon to be collected in book-form

What is the basic aim of Culture 8 This question Mr. Sethna pregionally aniscers, and indicates the faculities in us by which that aim is to be attained. A harmonious synthesis of all our cultural faculities is then itudity suggested—with hists about some practical means of encouraging it. The Societ technique is brighy noted but the psychological and ideological atmosphere natural and proper to our country is seen to be far other than the one factored by Societ Russia. Mr. Sethna underlines the Indian spritting genius and its accumulating continued expression and, justifying it, looks in its light upon the influence exercised by Sri Aurobindo's integral vision and realization as the most significant today. Next, he gives a summary sketch of the Culture Section, and finally to tessen certain unavoidable omissions a hiori constructive criticism is offered of some scrong terms Indian painting is liable to look in the future. Everythere in Mr. Sethna's easily a here and rhythmical visite lends added force to the thought.

Executive Editor.

#### CHLTURE'S TRIPLE AIM AND FOURFOLD PROCESS

O scientists were needed to trace the animal in man: we had long known with Plato that we contained the tiger and the ape. Nor was it war-correspondents reporting Nazism who found out the devil in man: centuries ago the Old Testament had seen our heart to be the lurkmg-place of wickedness and deceit. Nor, again, did Gerald Heard and Aldous Huxley first point to the god in man: the Rig Veda, from the dawn of time, had halled us as Children of Immortality.

With these three facts about man's nature staring us ever in the face, the aptest definition of Culture—of man's proper psychological growth and outflowering — is that it lies in his controlling the animal in him, combating the devil in him, consummating the god in him. And the means of Culture are those faculties that can achieve this triple aim.

There are four such faculties. First, the intellect striving Impersonally for truth. Second, the urge towards righteousness. Third, the pursuit of beauty. Fourth, the aspiration for the Infinite and the Eternal. Unless these faculties are given play, all

our planning for the future will be issueless efficiency and otiose organisation. Culture must be planned to save all other planning from being 'leather and prunella."

But the planning of Culture will not be a total success if the intellectual, ethical, aesthetic and spiritual sides of man's nature lack integration. They have to work together as one whole. Each by itself runs the risk of tripping. The intellect striving impersonally for truth can fall into the hands of the devilish instinct that turns science into flying bombs and gas-chambers. The urge for righteousness, the pursuit of beauty, the aspiration for the Infinite and the Eternal must be present in order to direct it nobly and fruitfully and profoundly. In the same way, the urge for righteousness can become the fanaticism of the formalist or the puritan-a narrow myopic passion-without the intellect's many-vistaed view and balancing of ideas in a disinterested manner, the sense of the beautiful guiding It towards constructive harmony and away from "wonky" extremism, the spiritual intuition evoking a luminous and spontaneous law based on unity-in-diversity. The pursuit of beauty too can miss its own authentic realisation



The bronze figure of Naturaja, the God Shire is a Cosmic Dance-modelled with extreme exquisiteness as well as power, with perfect belience of beauty in the modit of perfect mobile gesture-a unity that is many-limbed and many-functioned, an perfect belance of beauty in the anosts of perfect movine yearned investigation that is not the least prevented from outward capte individual form—here is Indian Culture in one of at florest moment frost symbolisations of itself. empressiveness, e universal force flowing out of an nts of creativity and in one of its

unless the sense of the true and of the good and of the Everlasting keeps it above barren decoration, the isolated ivory tower, the groove of self-satisfied sensuousness and surface-scouring pleasure. Even the aspiration for the Infinite and the Eternal, though holding at its core a natural secret of synthesis, can err if allowed to be over-outward or over-inward. Uninfluenced by the rest of our progressive attributes, it can precipitate itself into a bigoted religiosity attached to a creed, a ceremonial and a church. Else, It can recoll with disgust or disappointment from the manifold imperfect earth-existence and seek through peaceful or ecstatic trance an ethereal Beyond. To curb that other-worldly tendency the intellect, the moral impulse, the aesthetic instinct have to bend the liberated "unhorizoned soul" towards the detailed discriminating and ordering of ideas and things, the just inter-relating of persons diversely constituted and derived from diverse classes, the building of delightful significant forms that enrich the earth. The combined play, therefore, of the faculties that promote man's proper psychological growth and outflowering is the real goal.

### THE BROAD APPROACH TO INTEGRALITY

The goal, however, has to be approached very carefully, very considerately. No ruthless cutting away must be permitted of whatever follows too exclusively a certain curve of the cultural consciousness. If, for instance, there is in a particular artist an excess of sensuous expression, he must not be ignored, ostracised, pushed into a corner. The sane catholicity that is requisite for the combined operation of the four supreme faculties implies an Illumined tolerance. The word "iliumined" is, of course. as important as the word "tolerance", because, at the same time that tolerance is practised. the non-persecution should not become indifference: it must strive ever in a wise and inspired fashion to show the over-sensuous artist what he lacks. Thus, there would be carried home more and more to that artist the work of such masters as have shown a sensuous 'penchant' because their nature was cast in a sensuous mould and yet have infused their 'penchant' with beauties of other types to stop its falling from an all-round grace. Kalidasa is a case in point. No poet has been charged more with the body's colour and passion: still, his work displays both a firm discipline of thought and a sympathetic ethico-mystical tone. There is in him no disproportioned riot of external, luxurious, voluptuous loveliness. A poet like Valmiki, on the other hand, is ruled by the moral consciousness - but he is prevented from doling out dry didacticism by a warm imagination, a broad plastic understanding and an idealistic 'élan' towards the supra-mundane, which come in again and again to render his being's pecuiiar turn a vessei for harmonious Culture-expression. Vyasa is the intellectual poet 'par excellence': thought, subtle and puissant and penetrating, assuming a thousand shapes, eagerly running in all directions, pressing out theories and philosophies from whatever is at hand, is his 'metier'. Yet the Mahabharata is no monument of mere logic and metaphysics metricised. There is vivid vision in it

and there is the touch on palpitant flesh; and the artist-philosopher has a glow of goodness in his bosom, mingling with his self-utterance a cry about right and wrong, about divine justice, about human charity. In addition, a background is made perceptible of the Superhuman and the Delfic, putting forth a concrete embodiment of dynamic spirituality in the figure of Krishna. No predominantly spiritual poetry has so far appeared, which could compare in bulk and range of design with the edifices of sensuous, moral and intellectual poetry raised by Kalidasa, Valmiki and Vyasa. In the Vedas and the Upanishads - also in the portion of the Mahabharata where the scripture that has been known as the Bhagwad Gita is delivered --- we have substantial beginnings: some highest, deepest and widest inspiration of the Eternal and the Infinite stands in massive and open command without annulling the bright-edged reason, the call of morality or the essence of the sense-life. But In these old scriptures character and plot held together and interwoven into a jarge rounded world by inventive vitality are not found: the Gita's exceedingly dramatic situation is too brief and episodic to form such a world. Nor are they on a grand scale in the mystical output of Tagore who splendidly brought forth hundreds of short separate lyrics. Besides, he wrote as a rule in one single strain - the devotee's dream and desire; an unforgettable performance, yet wanting in the polyphonic amplitude of the Rishis. It is said that in a few years what was initiated in spiritual content and style by the Rishis will attain plenary completion and be sovereignly infused with inventive vitality in the epic entitled 'Savitri: a Legend and a Symbol' at which Srl Aurobindo, our greatest master of spirituality today, is working. Then there will be a match on the spiritual plane to the triumphs already with us on the other levels. All such achievements in particular, and in general any that are not topsidedly inspired, would be kept in the forefront of the national mind by the planners of Culture in order to induce global fuliness. While giving perfect freedom for genuine inspiration of every sort to find voice and reach the national mind, there would be a tactful psychological push towards integrality.

That push can be administered to both life and art in two ways: first, constant exhibition of the harmonious synthesis and, second, education with a constant tendency towards this synthesis. But before the two ways can be authentically practised, we must set aside the tyranny of the economic mentality. The economic mentality sways the present age. Everything is seen in terms of money-returns. If a scheme is drawn up for any purpose, the prime query is: "Will it pay?" It is understandable that the business-aspect of a scheme is not neglected: however, to foster always such schemes as make the nation richer is to multiply money unnecessarily. Together with projects that bring gold and silver there must be others that pour not glittering metal into the nation's coffers but Intellectual, ethical, artistic and spiritual light into the nation's consciousness. What does it matter if wealth does not increase through all that is attempted? Wealth is

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there to bring not merely more wealth; it must bring growth and outflowering of the inner seif. As long as our aims are haunted by "Will it pay?" we shall never have a sustained Culture. It is not the utter putting away of the business instinct that is advised: what is desirable is that the business instinct should not sprawl over everything. We must clearly see that Culture must be encouraged even though it may not pay.

In this respect as well as with regard to cultural exhibition and cultural education we have plenty to learn from the Socialist State of Russia. Russia today has a vast network of drama and music and painting made easily accessible to the commonest worker. Schools and colleges provide lavish education, learning is scattered with an equal hand to the whole community. But the Culture that is thus provided has the Marxist ideology at its back. Everything is interpreted in the light of that ideology. Capable though that ideology is of causing the inner seif to grow and outflower in an ethico-social direction, the Cuiture it pervades leaves undeveloped many aspects of man's being that are the most precious and that can lift even social ethics to both a nobier and more effective plane. Whatever the formal departures from the old Mechanical Materialism in regard to the process of phenomena, the new Dialectical Materialism is foundationally no different. The inner self is viewed and treated as an outcome and a dependent of the outer: the testimony of the world's mightlest and finest philosophies, richest and most powerful art-creations, rarest and intensest psychological experiences is set at a discount: In short, the soul of man, that radiant. dweller in many worlds, that embryo godhead, is short-sightedly deemed a strange phosphorescence of the wavy grey stuff of the material brain. A variant of this view is the looking on all mental activity as the sum-total of the throat's muscle-movements: to think is simply to talk, joudly or under one's breath t In any case, there is for the Marxist nothing else than phases of physical function. But, thanks to research In extra-sensory perception carried out under test conditions and statistical scrutiny in laboratories in Cambridge and at Duke University In North Carolina, the day is iong over for physical function to loom large in science even. When anything is transmitted across physical space, the distance diminishes the strength in exact inverse ratio; but controlled and certified experiments in telepathy have found that a thought transmitted from afar is invariably as strong, as definite as one from a neighbouring locality. So it is proved that telepathy is not a kind of radio across physical space with a bodily part acting at either end. Much iess can a bodily part be held responsible for prevision, for seeing correctly the future. The mathemateally sifted fool-proof laboratory-instances brought forward of prevision set at nought physical time in addition to physical space. The evidence collected by Dr. Rhine and others has given with a strict scientific procedure the 'coup de grace' to materialistic self-sufficiency. Of course the body-formula yet holds sway over those who refuse to look at the new facts and figures

about faculities present in us though seldom developed and used; but no honest inquirer can now help concluding that experimentation as accurate and systematic as any scientist could ask for has shown it to be devoid of finality. So, we have to learn the technique of cultural exhibition and education from Soviet Russia without needing from even a modern angle to accept the type of Culture stressed by Lenin and Stalin.

### CULTURAL SYNTHESIS IN THE INDIAN LIGHT

Dr. Rhine and company, however, are not indispensable to India for seeking her cultural synthesis far beyond the Marxist ideology. At the very dawn of her history there was a huge outburst of mystical experience and in the light of it the whoic Indian clvilisation was shaped. Such a shaping was inevitable because somehow the Indian character was prone to be mystical and because by that proncness those who went in for sustained mysticism gained an experience so intense and immense that it simply gripped and enveloped the consciousness of the nation, making the fullest use of the nation's natural leaning. Life, in all its spheres, got permeated with an intuition of the Eternal and the Infinite - an intuition that drove through various channels towards the ideal of an actual concrete realisation of a spark of divinity ensouled amidst our mind and vital substance and body, a Cosmic Consciousness at once single and manifold, an ineffable Transcendent from whom all things have derived and whose perfection all things are struggling to manifest. Every Indian was expected to become a practising mystic at the end of his career. He was asked to divide his life into four periods. In the first he must be educated and prepared intellectually, ethically, artistically, spiritually. In the second he must take up the burden of domestic and social activity and be a fruitful philanthropic citizen. In the third he must turn gradually the wideness and richness of his nature after multifarious contact with the world to the ideal of mysticism. And in the fourth he must give up all ordinary ties, rise above the joys and griefs, giories and miscrics, triumphs and tribulations of the common existence and plunge wholly into direct mystical union with the Suprememoving, after the union, among human habitations for no personal or world-coloured ends but exclusively as a transmitter of the peace that passes the understanding and the force that flows from the Limitiess. The three preceding periods were deemed valuable to the extent to which they aided him to be successful in this final consummation.

Though crores of Indians live as unspiritually as other men and attain as little to the mystical experience in their old age, the test of value set up in ancient times has persisted down the ages and the conviction has never been lost that the most important and authentic reality is the Eternal and the Infinite. The reason is not only that the seers of the Yedas and the Upanishads had a far-reaching

<sup>&</sup>quot;See Staty Years of Extra Sensory Perception" by Dr. Rhine; Fred. C. D. Broad's Presidential Address to the Society for Psychical Research, 1936; the Journal of Parapsychology (Duke University), June, September and December, 1942.

influence but also that the Indian consciousness has been fed continually by a long line of saints and yogis running like a river of light through the uplands and lowlands of history for the last three thousand years. The Marxist ideology as a basis of Culture is utterly impossible in India not because Indian thought and imagination have long been busy with God but because India does not just think and imagine about God - she has known God with an overwhelming Intimacy and directness which cannot be swerved by the argumentation of Dialectical Materialism. Indian Culture cannot ever be demysticised. Its recent renaissance, true to the national genius, is shot through with spiritual gleams. Its greatest figures have burned with a flame of yoga and most of its prominent representatives have stood on the borders of mysticism. Tagore talked as much of God as of poetic beauty and the University of Shantiniketan. Gandhi has the name of God on his lips as often as the call of non-violence and the cry of Swaraj. Ramkrishna and Vivekananda were shining storms of God, two colossal rebirths of the ancient splendour. And it is because Indian Culture has ineradicably its centre in the spiritual that today the deepest creative factor for the future is the man who is not only a superb scholar, poet, philosopher, political thinker and past nationalist leader but also a towering yogi - Sri Aurobindo,

### THE PARAMOUNT SIGNIFICANCE OF SRI AUROBINDO

Sri Aurobindo is the exponent of a spirituality that is not in the least escapist. It is largely owing to him that the current notion of Indian yoga as a psychological mechanism to fight free of the earthscene and pass out entranced into a supernal heaven or Nirvana has been replaced by the truer view of It as escapist in one branch only and in many branches potent for earth-use and for man's myriad needs. Nor has Sri Aurobindo been content to revive the lost life-enriching spirituality of ancient days in a new form; he has carried it to an amplitude and a detailed efficacy in all our members never realised before. For he has based his yogic experiment on the intuition that the earth is the stage on which a drama of the Divine is enacted, a drama which starts with the concealment of the Godhead in what seems His utter opposite - the apparently unconscious whirl of matter-and which reaches its climax when that opposite becomes a complete expression of the Splendour concealed. The Aurobindonian attitude implies much more than adding, to the aim of liberating man from the earthiness which binds him, the alm of casting a general spiritual influence from the God-realised soul on its embodied activity. The rejection of the theory that the field of time and space is an illusion to be fled from as soon as possible by a shooting up to some unlimited Being above temporal and spatial conditions is indeed right, for the cosmos can never have a 'rationale' if it was made just to be kicked away. Stress must be laid on manifesting the Supreme in terms of cosmic reality, on accepting the adventure of life, the challenge of matter, the multifariousness of Nature's demand. But such a mani-

festation cannot cry halt with merely embracing life and touching it to spiritual ends. The very terms of the God-realised soul's embodiment must partake of the Divine, be themselves God-realised. Our whole composite nature must be transformed until not only our mind force and our vital urge grow divinised but even our physical self turns deific and blossoms into a stuff undreamed of by past saints and sages. Then alone will the field of time and space be justified and the full purpose of its emanation from God be served. Not till then will God be a ruling power, here and now, instead of an artist doomed for ever to be half-defeated by the medium through which he works. Since the elements of our whole composite structure have come from nothing save the Divine who is the ultimate, our total divinisation can be no 'fata morgana', however sceptical our habitual way of thinking and living may render us. Deep in the undiscovered Spirit there must be a dynamis which holds the truth, the archetype, the perfect pattern of which these elements are the broken and obscured images emergent from that starting-point of the evolutionary drama, the figuration by the Spirit's Light of its own contrary. It is this dynamis - with its promise of a flawless recasting of man's consciousness and, in the final phase, a spiritual conquest of bodlly disease and decline - that has been for the first time clearly sought by Srl Aurobindo and masterfully possessed and set operating in the yoga which he offers to all who put themselves under his shaping hand in the Asram at Pondicherry.

To be liberated by an inner psychological process from limitation by things as they are, to ascend to a supra-mental status of consciousness by an unsleeping aspiration, to bring down into things as they are the giories and powers and beatitudes of the supra-mental till the archetype of the human is integrally incarnated: this is the Aurobindonian yoga. Its destiny is to meet the smallest and meanest of our daily needs, to illumine and reorganise all our living, so that each mode - art, philosophy, science, industry, civics, government - may be given a new unflagging energy of inspiration which exceeds immeasurably the intermittant flashes of insight the mind of man enjoys at present. By those fev flashes man has achieved whatever is of value on earth — the sole fruitfui part of his planning is kindled by them. But they are not enough: the entire dynamic Sun of which they are stray beams must be ours. And Sri Aurobindo is the discloser of that Sun wherein the secret plan of a divine earth is aglow. The vision that he has iaid bare in his numerous writings and that he is working out in practical terms in his famous Asram cannot but prove of paramount significance for India's cultural growth.

## THE RANGE AND CONTOUR OF THE CULTUBE SECTION

Fittingly, therefore, in the pages that follow there stands a special article with the caption: "Spiritual India and Sri Aurobindo". The message its author, Mr. Anilbaran Roy, expounds from several angies has touched also other contributors on Cnlture without hampering them from noting and appreciating secular agencies and outflowerings. Mr. Dilip Kumar Roy in his many-faceted essay on Indian music lays an emphasis on the spiritual attitude and emotion. Professor K. R. Srinivasa Iyengar who writes on Indo-Anglian literature with an outlook in all directions sees eye to eye with him as regards the central position of the mystical motif in our artistic activity. Here the role of the English language calls for a remark. Whether we admit it or no, English has come to stay in India; it is now part and parcel of our cultural life and in the midst of innumerable tongues chequering the air it promises to be the 'lingua franca' of the literate. So, if it can be mastered-and mastered it can, as the writers listed by Professor Iyengar show - it is most suited for carrying our deepest messages all over the country as well as all over the world where too it is almost the universal language of inter-communication. Nor is its prevalence the sole advantage: a keener advantage is its great maturity and its multitude of tones, rendering it the finest vehicle for quick powerful many-sided suggestion and consequently the best for mysticism's subtie lustres and shadows, sudden raptures and reticences. The newly expressive stamp put on it by Sri Aurobindo himself both through prose and verse and by those who are being inspired by him adds to its hold on our life. And even for a non-mystical and less original purpose the points in Its favour are legion, as evinced by the publication of "15 Years Ahead" in English rather than any vernacular.

Not that the vernaculars have a small role in India's future. The languages that Indians have imbibed for centuries with their mothers' milk are bound to be the most prolific in literary creations of Immense value-in fact so prolific that the present compilation, suffering as it does from tack of sufficient paper stock, has not been able to devote articles to planning the broad features of the creative forces rushing across this sub-continent through Hindi and Urdu and Gujarati and Tamil and Bengali. A portion of these forces, however, has been isolated for close study by Dr. R. K. Yajnik for casting the right lines for the Indian drama and theatre of tomorrow, But Dr. Yainik is no psychological "Isolationist", for India has to be modern, march with the times and display her own proper genius not without assimilating the fast-moving West.

An international outlook is also at the back of Prof. A. R. Wadia's liberal discourse on Culture as an educational ideal. Indeed, true Culture cannot help being international unless it wishes to knock all meaning out of itself. A wide humanity is its kernel—sweetness and light drawn from many quarters and spreading everywhere—absorbing all things, understanding all things, enveloping all things, though remaining free from any amorphousness. Yes, free from any amorphousness; for together with being catholic it must have, as Professor Wadia is aware, a direction: it must not dissolve into an elegant encouragement of 'alssez faire'. It has principles, since sweetness and light are positive powers, upiliting man

with a sure formative grip on him, while trying to hurt his frailties, even his wickednesses, as little as possible. And both light and sweetness bring their norms tinged somewhat differently by different national dispositions and circumstances. As out of place as amorphousness in cultural catholicity is monotone.

All the essays here collected have rather a general vision than a detailed focus of the future. This is natural since it is the free and spontaneous inner self of man that creates Culture and its motions cannot be rigidly regimented or charted out. But the signs of the days to come are read sufficiently to help planning. Only two branches of Culture are left unexplored: one I have already mentioned-vernacular literature, the other is painting. Whereas the tendencies noted in Indo-Anglian writing can be regarded as reflective to a fair degree of those in the literary output in indigenous tongues, no essay serves even at a second remove to reveal the paths Indian painting should most profitably follow. Not any intrinsic want of significance in our painting, but publishing difficulties are responsible for the gap. What the organiser of the Culture Section can do to lessen the gap is pretty little. Just a few points can be stressed. They arise from his belief that the prominence given in the near past to the pictures done by Rabindranath Tagore in his old age has been harmfui, while the praise lavished on Jamini Royespecially after Beverley Nichols had declared him our most vital artist-has been misleading,

### SOME POINTS FOR THE FUTURE OF PAINTING

What a gulf between Rabindranath Tagorc, the first painter-genius of the Indian Renaissance with his profoundly imaginative commingling of strength and delicacy, and Jamini Roy, the reviver of the psychology and technique of a certain type of viliage-art, as well as Rabindranath Tagore, the Indian edition of extreme European Modernism' Unquestionably, the Neo-Bengal School of Abanindranath did not cover all desirable features; maybe, its strength was often subdued to a delicacy too fastidious and some closer contact with the common man's vitality and posture would be salutary; also, the claims of external Nature might be conceded more generously and more accurately. Jamini Roy is one direction in which the break with the Neo-Bengal School has led, but, as a recent critic, Mr. S. Chatterji, has observed, this direction has not culminated in any artistic triumph comparable to the masterpieces of Abantndranath or his disciples. Mr. Chatterii explains that the type of village-art which Jamint Roy brings to the fore founded itself on a repetitive motif and Its methods were unsophisticated and formal. The colour-scheme was limited and the flat washes showed barely any shading. The figures stood oot in heavy dark outlines. The subjects were mainly mythological since the old villages lived in religious traditions. Jamini Roy's use of this viliage-art exceeds the old themes: he embodies also the modern temperament and atmosphere. And he has introduced a few improvements in technique: a linear quality that is more forceful and a colour-scheme that

is more varied. Yet his performance as a whole fails to be inspiring to the inner seif. The emphatic outlines are frequently stiff and impervious to characternuances. The colouring tends to be stereotyped. There is, no doubt, a play of quaint and fantastic attitudes which intrigue the eye and create a sense of novelty. Still, they lose much of their appeal because he goes on repeating them until they are degraded into a monotonous and mechanical vitality. What saves his pictures from being failures is, as Mr. Chatterji maiks, his invariable flair for balanced composition. But can original and well-poised patterning suffice? Is there any significant experience behind it, any revelatory vision, any profound stir of emotion? Are there intensity of sight and intensity of rhythm breaking upon the striking surface of Jamini Roy? Does any elemental power of magic or mystery surge from his depths, any magnificent secret from beyond the exterior of life shine through? The intellect, the heart, the instinctive nature, the unknown background which we vaguely call the soul, remain unthrilled when we look at the quaint forms and designs which he executes in the main with a ponderous and obvious touch Here and there his human figures lend some charm and voice to his paintings - but this appeal is not lifted, except on rare occasions like his "Santhal Girl", to the pitch of creative art.

Rabindranath Tagore's deviation from the Neo-Bengai painters is towards a variant of the Surrealist school. Jumbied ideas and obscure impulses, amorphous stirrings in the grey cells and in the entrails, are the preoccupation of Surrealism physical proportion and versimilitude mean nothing to its practitioners, rules of regularity, symmetry, harmony are shackles for them, their hands fight free of such superimpositions on the natural and primitive urge in them to represent their thoughts, feelings, whims, fancies, dreams, nightmares "unrationalised", just as they froth up from the recesses within. Crudely simple or grotesquely complicated, giaringly monstrous or confusedly gorgeous, their "unrationalised" outburst trampies on what they deem the duli and tame rigidities of the old art. Now, these rebels do have something in common with the essential Indian mind in their emphasis on the inner reality which is different from the outer to which we are accustomed. A good part of ancient and mediaeval Indian art violates perspective and anatomy and the "values" of the physical eye in general. But it does not dabble in the chaotic subconscious or the haliucinations of aberrant nerves. There are a few genluses among the Surrealists and their distortion and excess are rescued from sterility by the powerful piercing focus to which they somehow bring their gaze, making it disclose strange traits of character and strange psychological tensions in a sort of perverse perfection. However, the bulk of the results is disappointing, and for the Indian mind the mood of Surrealism cannot be natural. The Indian mind bases its defiance of ordinary canons on the Superconscious and not the subconscious, the illumined spiritual being and not the ambiguous field of the psycho-pathologist and psychoanalyst. We may be affected by "modernist" 'penchants', but we must remember that what in this case we are affected by is 'penchants' of "modernist" Europe. India, gone "modernist", need not pursue the same mood as Europe. Some affinity there can be, and yet some dispositional difference too. The pictures the aged Rabindranath was driven by some urge of his nature to produce are not in consonance with the "modernist" turn we may expect from India. It is an oppressed, convoluted, incoherent, sub-human inspiration, achieving a simulacrum of harmony in isolated spots by sheer accident, the major portion of the work remaining crude in conception and gross in technique and deficient aitogether in the genius-pitch the Surrealists here and there attain in France. It is a deformation of art. It has no saying height of power or passion lifting momentarily the deformation to a kind of ideal of its own wryness and fever and crudity. Merely to make an odd and bizarre impact on us cannot provide us with the artistic experience, nor can a sudden raising of the subconscious to a chaotic arch-image, as it were, of itself ever lead the Indian mind to its artistic fulfilment.

Many innovations of technique, many new "siants" of sight we can assimilate from the West. We must, nevertheless, produce from our own depths and not imitate new things just because they are new or borrow the depths that are foreign to us. The West could get valuable effects even from perversities because the perversities it chose could be linked up sometimes with its own depths. We cannot connect with our own depths foreign perversities. But there is no need to go in for perversities at all, whether foreign or native. Our trend is to create concordant wholes with an intuitive eye bright with visitations of the Superhuman and the Divine. That eye and not the psycho-pathoiogist's and psycho-analyst's scrutiny is to be set functioning. It is not obliged to dwell exclusively on what is behind the veil: it can range over the outer world but it must not lose contact with the veiled wonders. Truly to avoid being echoes of the past let us become more intuitive than the ancients and the mediaevals and not less. Truly to be "modernist" let us turn our eye towards regions the ancients and the mediaevals scarcely touched, yet not with an intuitiveness inferior to theirs. The fastidious delicacy of Abanindranath Tagore is not the only mode legitimate to Indian art: his greatest disciple, Nandalal Bose, has achieved fine departures from it, and several departures in the direction of Naturalism are also possible. All the same, there must be a certain fastidiousness and there must be a certain delicacy of one kind or another in order to keep the measure and the subtlety without which neither strength nor novelty can become art. And if we are to rise to the top of our potentialities we must practise the measure and the subtlety which are art's indispensable conditions with a living influence upon us of the basic genius of India—the intuitive soul that feels itself to be a spark of the Infinite and the Eternal.

# CULTURE AS AN EDUCATIONAL IDEAL

### A. R. WADIA

A.R. Wadia, R.A. (Rom, and Cantal), Barat Law, once Director of Public Instruction in Mysore as vector of Professor of English and Philosophy at different colleges and Prentient of carrous educational avocations, has written 'The Rhics of Feminism', 'All Insubooks of Moral Instruction for Teachers' Civilization as a Co operative Advantace' 'Prognatic Ideatism', (contributed to 'Contemporary Indian Philosophy, edited by Sir S. Adahakrishman), 'Noroaster, Rit Life and Teachings', Reides these valuable books, he has also published thoughly atricks on Philosophy, Beltynon, Sociology and Education in journals tool only in India but also in England and U.S.A.

Prof. Wadia's discourse finely focuses the qualities of culture in a nation creative istaility, understanding, polish. It distinguishes the essence of culture from the tox and superflect and format induse of mere civilisation. It has a large outlook and direct an attractive picture of the cultured man as harmonising all the indust that distinguish the truly human. In a style at once simple, graceful and pointed it marks out the necessity or well as the wellood of making the virious sides of education—literature, history, religion, science—conduce to the dynamic yet catholic entities which the author sets up as the right goal for India and the world of life is to be bright and sweet and if luleous were are to be avoided

At Lt true education has a twofold aim: development of knowledge and development of character. There is a tendency to emphasise mere learning in education, but if a man, however learned he be, does not know how to behave in society, his education must be looked upon as defective. This twin ideal of education can be best brought together under the concept of culture. It is often treated as being identical with civilisation, but there is a certain difference between the two words which is coming more and more to be recognised.

### CULTURE AND CIVILISATION

Spengler looks upon culture as the period of growth in a people's life when art and literature flourish as a spontaneous exuberance of life. But sooner or later a time comes when this spontaneity is lost, life loses its freshness, when people live more in the past than in the living present. This stage is identified by him with civilisation as the "inevitable destiny" of culture. A civilised man in this sense is a lover of ease and luxury, with a dilettante love of the arts and a veneer of morality but without that strength of character that marks a great dynamic life. To put the contrast in another way, civilisation is the congeries of ideas and ideals that we inherit and tacitly accept, while culture represents our liv-· ing thought and creative reactions to our environment as inherited. It is culture in this sense that should represent the ideal of education. A cultured man should be both learned and good with an urbanity of manners that go to make social life so charming.

Culture stands for a definite attitude to hie. It is born of a deep understanding of life with all its variegated facades, its purple patches and its shadows. It appreciates the complexity of human life and does not take a cut-and-dried view of human successes and frailties, and so it does not breed an arid dogmatism. Such an understanding of life breeds tolerance of human weaknesses: a gentle reproof rather than an angry condemnation. Courtesy and kindilness of heart constitute its outward manifestations. The life of culture may be briefly but expressively put in the great words of Goethe, himself a typical man of culture in the highest sense of the term: "Life in the Whole, in the Good, in the Beaultful."

### THE MAN OF CULTURE

• It would conduce to clarity if instead of indulging in an abstract description we were to visualise a man of culture, who unfortunately is by no means so common as the mere quantitative growth of education in our schools and colleges would make us expect.

A cultured man must be a man of knowledge in its broadest rather than in its intensive sense. A narrow specialist can never be a man of culture. Stephen Leacock with his lnimitable humour portrays the narrow specialist in that numlsmatist, who when he was asked some simple question became apologetic and could only say: "I don't know. I am Numismatics." It is impossible for a man to-day to be encyclopaedic, but it is the privilege of a man of culture to have a a somewhat wide knowledge of the living problems of the age and of the past: the great epochs of history, the great men who have built up the structure of human culture: Its prophets and statesmen, poets and philosophers. Bacon's advice ls pertinent in this connection: to know everything of something and something of everything. General knowldege of this character reduces narrowness of outlook and makes one appreciative of different cultures. This is particularly desirable in connection with religion, for religion by its very intensiveness tends to breed a very narrow outlook and even fanaticism. The man of culture is repelled by any exhibition of bitterness and intolerance, for by his very culture he is better able to appreciate the unity of religion and the unity of thought that underlies every great religion. Toleration of differences of opinion at least, where a sincere appreciation of another's views is not possible, makes for reasonableness in life and minimises the chances of conflict.

A man of cuiture, apart from his love of books, develops his love of nature in her myraid mooks of sunshine and moonlight, the vivacity of spring, the languor of summer, the hues of autumn, the rigours of winter. He loves to react to the music of birds and the fragrance of flowers, the play of animals and the splash of fishes. Nature as a store-house of beauty becomes his native home. And the love of nature leads on to an enjoyment of beautiful descriptions in poets, and the painters' art trying to vie with nature herself. Beauty of every kind, of every shade of nature, beauty of the human form in all its curves and lithesomeness, give him a joy of life and attune lits whole being to the rhythm of creation.

A man of culture finds his greatest joy in human communion, e.g. Plató's Dialogues give one an Insight into the charm of Socrates as a cultured man with his aculteness and logic and reflections on all the phases of human life. There is a certain dignity in his conversation, free from the frivoilty of the frivoious and the idle chatter of the light-hearted. But it is not without wit and a gentle bantering humour of the type we find in Anatole France or Stephen Leacock.

A man of culture may give himself up to work, but he maintains his mastery over his leisure. He needs a certain time for communion with himself in the sanctuary of his room or his solitary walks. Leisure gives him time to give himself up to something for the sheer joy of it, maybe reading or musing, or some favourite hobby or creative activity.

None of the characteristics mentioned above can by itself go to constitute a man of culture. A man given to books only can become a mere book-worm without that interest in living humanity which goes to the making of great books. A man given only to the

worship of beauty may become just an aesthete and lose all touch with the realities of life. A man given to love of nature only may become only a dreamer, unfit. for the tussles of life.

Nor can a man who loves books and nature and beauty be said to be really cultured unless all this makes him humane and urbane in his treatment of fellow beings. This constitutes the real crux of a cultured man. A capacity to understand the difficulties of others, to appreciate opposite points of view, to share the sorrows and disappointments of others, and similarly to share in the joys of others, in short a capacity to shed the light of his knowledge on the everyday world of human intercourse — all this goes to give a man the hall-mark of culture.

### THE NEED FOR CULTURAL EDUCATION

Some people may have the gift to develop the type of human personality portrayed above without any external aid, but most people need to be educated on these lines. Education is the most potent instrument by which we have to mould the lives of the young in the direction we desire. Mussoiini and Hitler fuily understood this and made full use of their power to develop a system of education which would give them the type of youths ready to work and die for their Duce and Fuhrer. The world writhed and groaned with pain and anguish for six terrible years as the result of this education. It is for the makers of future humanity to evolve a system of education which will make men appreciate their common inheritance of literature and philosophy, art and religion, built upthrough the co-operative labours of countless generations of writers and thinkers, artists and prophets, of aii nationailtles.

The problem of education is of all the greater limportance for India, since apparently conflicting civilisations have found their home on Indian soil. Historical conflicts in days gone by have left behind bitter memories. Differences in social customs have effected social barriers which have made mutual understanding all the more difficuit. Economic solutions of the ills of India are Indissolubly bound up with the political future of India, but no political solution seems possible so long as communal acerbities are not overcome, and for this education appears to be the only feasible means.

So long as children start their life with the idea that they belong to a particular group or community and that they must accept blindly the ethos of that group as the best in the world and thus come to have a warped outlook on all other groups, we shall neverbe able to overcome the vicious dricle of conflicts. The right approach in an educationist is to foster in children from the very beginning their essential humanity. This can be easily achieved in various ways.

### THE INFLUENCE OF LITERATURE

FIRST of all there is the vitalising influence of therature. The beauty of language is necessarily restricted to those who know it, but the beauty of thought is not appreciably affected by translations, and in the world to-day with its rising literacy thepotentialities of translations are endless. In India, particularly the need for Muslims to know something about the treasures of Sanskrit and for Hindus to know the treasures of Sadi and Firdusi, Hafiz and Omar Khayyam, is imperative. The gentle sway of Sufi poetry cannot fail to remind the Hindu of his own Vedanta, while the beauty of 'Shakuntala' cannot fail to awake the slumbering Muslim, when it was rapturously appreciated by a Goethe far away. And the same applies to modern vernaculars of India. Tagore has set a new fashion in literature and his singing patriotism as much as his deep international humanism, which has moved Europe, should not fall to move an Indian whatever his province or his religion. · That is what constitutes the charm of pure literature. It wings its way to the deepest recesses of the human heart and forces its way across all geographical or national frontiers. Our text-books should be cosmopolitan, culling their lessons from the whole reservoir of the world's vast literature. The poets and the novelists are the interpreters of their own peoples, and when we begin to appreciate them we unconsciously tend to appreciate the people as well, whose joys and sorrows and aspirations have been so gloriously portrayed by these poets and novelists. Literature constitutes the key to a people's soul. The degree of British influence on India is to be measured not so much by the administration and laws as by the extent to which the Indians have reacted to . Shakespeare and Shelley, John Stuart Mill and John Morley, George Bernard Shaw and H. G. Wells.

### THE LESSON OF HISTORY

SECONDLY there is history. It is not a record of only pleasant episodes. It unveils many a dark tragedy of human greed and treachery, many defeats and humiliations, but it also portrays the struggles of a people to live their life in the face of failures and to maintain their national self-respect. The history -of India is a particularly difficult subject to handle. It cannot be blind to the waves of foreign conquerors, and such conquests are apt to leave bitter memories behind. A wise teacher, however, should always inculcate in his young pupils the pure objectivity of history as a record of the past which cannot be changed, for the past is past, but he can utilise its teachings to show how the foundations of a new history can be laid by transforming the defeats of the past into a new inspiration for the future. No history can ever be a record of mere failures. Even Indian history is not an exception to the rule. No one can be blind to the good that often follows the evil. Alexander's conquest of the Punjab brought the Indian and Greek cultures together, and the impact of the two made history with the influence of Greek art and culture on India and 'vice versa'. . Similarly when centuries later the Muslim conquests of India began, there began also a new era in Indian history: an epoch that produced the statesmanship of Akbar, the poetry in marble of the Taj Mahal, and the beautiful life of Dara Shikoh, whom a cruel fate prevented from cementing the two cultures even more than Akbar had succeeded in doing. These are merely the high lights of Muslim domination in India, while · our ordinary history books do not record the peaceful

mingling of the two peoples. They do not record how even Aurangzib, who is usually painted as a Muslim fanatic, had numerous loyal Hindu officers, greatly appreciated by him. How many Indians know the beautiful episode of Wali Ram, a Peshkar of Aurangzib? We owe it to a patriot like Dr. Syed Mahmud has seen the light of day. Once Wali Ram felt that he was insulted when his royal master kept him waiting too long. In a huff he returned home, gave away all his belongings to the poor and became a yogi on the banks of the Jumna. When the Emperor heard of it he himself walked to where the Peshkar-Yogi was, and begged for forgiveness. But he stood abashed when he was told: "While I was in your service I stood in the hot sun for an hour aod you did not take any notice of me. Now when I have resolved to serve the Real Master (God) you yourself have come down to me on foot." The implication of this retort was clear and was not lost upon the Emperor, who too in his own way was a deeply religious man. On another occasion when Aurangzib was asked to get rid of two officials on the ground of their being non-Muslims, he refused on the ground that "Religion has no concern with secular business, and in matters of this kind bigotry should find no place." When they quoted the verse of the Quran; "O believers, take not my foe and your foe for friends", Aurungzib coolly quoted the much-too little known verse of the Quran: "To you your religion, and to me my religion."

Episodes of this type relieve the gloomy picture that historians are fond of drawing when they speak of Aurungzib. Muslims have become part and parcel of India, blood of her blood and bone of her bone. One cannot but admire the statesmanship as well as the patriotism that lies behind the noble words of Peshwa Baji Rao, when he wrote in a letter, "This is no time for internal mutual disputes. It is the time for us to forget our own quarrels and make up our differences. It is most impolitic and improper for Raghoji and myself to continue our mutual strife. We can very well, for the time being, disregard the Portuguese encroachment as it is a negligible factor. India's greatest and only enemy to-day is Nadir Shah. The Hindus and Mussalmans should unite together to expel this foreign foe so that Moghul Government may not further be weakened and the country's freedom may not disappear.' (Muslim University Journal: October 1940)

Hindus too have to releam their reading of Indian history. It is a standing memento of divided kingdoms too weak to resist an enemy, of the fissiparous tendency in the Indian soil, of which the caste system is the most typical example and perhaps even the root cause. In the India of the future, Hindus too will have to relax the rigour of their castes, as the Muslims have to forget that though their religion may have halled from Arabia their future is bound up with the prosperity of India.

### THE POWER OF RELIGION

THIRDLY comes religion as a cementing force. In the past it has served rather to divide than to unite the peoples of the world, as has tragically happened in India. But this feature of religion is the result of ignorance fostered by priests for their own purposes. In the days of illiteracy the priests inevitably dominated, but with the growth of education and the steady liquidation of illiteracy that the world has seen, the power of the priests has been steadily going down and with the spread of education in India the same phenomenon is bound to occur in India too. A Hindu will find a good deal in the Quran worthy of his admiration and reverence, and a Muslim will find in the Upanishads and the Gita a good deal to admire There are indeed striking differences between these classics, but they are not of that character which should lead to the breaking of heads or to mutual hatred. On the contrary, the very greatness of these books and their historical importance, should breed a mutual respect for them And if there still remain some unbridgeable differences there is the authority of the Quran. "To you your religion, to me my religion" It is exactly in this attitude of mutual respect and toleration, if not of appreciation, that the culture in a man's soul asserts itself. Religion of the future should play its native role of a peace-maker and peace-bringer, instead of setting one set of men against another. In this war of religions we see the worst kind of civil war, for it is a war between the children of God, who forget their common Father and their own brothers.

### THE EFFECT OF SCIENCE

FOURTHLY and lastly our educationists will have to deal with the new forces that science has brought into existence Unless we learn to harness them with the spirit of culture they are apt to overwhelm us. Science has made itself responsible for forging devastating means of destruction under pressure from nationalistic governments But wars of the type that our generation has witnessed twice within the short space of twenty five years do no credit to humanity and are fraught with grave dangers to all culture and civilisation. Wars can only lead to human suicide, and so it becomes the duty of every sane statesman to restrain the misuse of science, or the very logic of destruction must bring the warring humanity to a sense of its folly. Let us trust that the forces of culture as represented by literature and religion will trlumph. and once this is done science as an instrument of peace has a marvellous role to play in the future development of mankind. It was a wise instluct that made the Frenchmen vote for Pasteur as the greatest Frenchman even in the face of all the glamour of Napoleon.

Science has annihilated distances that used to separate the countries of the world. It has literally made the world small. And this has made international contacts closer than ever before in the history of the world. Such contacts can lead, and have actually led, to an exploitation of the weaker peoples. But the forces which have led to the emancipation of the common man in Europe and America from the thraidom imposed by the priests and the nobles and the wealthy capitalists, are also bound to lead to the emancipation of the weaker peoples of the earth. The economic organisation of the world is

changing before our very eyes. The interests of theconsumer rather than of the producer are gaining ground and constitute the basis of all economic plansfor the future. The slums which have usually accompanied industrial expansion will go under the new planned economy.

Whatever may have been the evil effects of industrialisation in the past, which roused the wrath of Carlyle and Ruskin in the last century as it has roused the intense antipathy of Gandhiji In this century, it must be said to the credit of industrialisation that properly planned and directed it will lead to mass production and release a vast amount of human energy to be used not for the daily drudgery of life, but for the expansion of life. Limited hours of work mean a great deal of lessure even for the factory worker and the worker in the field. How is this leisure to be used? Not in the opium dens and the public bars of old, but in libraries and museums, parks and gardens, cinemas and theatres, but most of all In the sanctuary of one's own home, small perhaps but comfortable with one's own select books and pictures and radio to be in touch with the ends of the world, and the drudgery of the daily household work considerably reduced through the use of electric appliances for cooking and washing and laundering. This is the dream of the future, not some remote future but a future that most of those llving to-day may see in their own generation.

### THE NEW ATTITUDE AND EFFORT

And this is what India 15 YEARS AHEAD can stand for and aspire to. Perhaps it may take a littlelonger for the thousands of villages in India to catch up with the age of electricity; it will require a new orientation of attitude to life. It will have to do away with our centuries-old fatalism. We shall have to lift up our heads and look the future boldly in the face. Illiteracy, windowless huts, pools of dirt and filth, caste barriers will all have to yield to the advancing tide of the new age with its culture when the east and the west will meet and exchange the treasures of their hoary past. Given the right spirit and the right attitude to life, nourished in the warmth of all-embracing culture, time does not matter. Themasses of the world have waited for millennia for their right to the good things and the joys of life to be recognised. To-day we are just awakening to a new world. 15 YEARS AHEAD we shall set our feet firmly on the rungs of the future and 15 Years Hence we must will to find our feet firmly planted to reap the harvest. But it implies vision, effort, perseverance, clarity and sanity of thought, goodwill to men. It is for wise education1sts to plan the moral regeneration of mankind, without which mere economic plans will turn to ashes. A dream beyond Plato's: the realisation of the Republic not as he conceived it within the four walls of a circumscribed city state, but in the new commonwealth spanned by the unseen waves of the radio and the lines of airways making the men in one part of the world just next door neighbours to men in any other part of the world! 15 YEARS AHEAD may sum up the travail of ages and lead on to a new Pisgah, in which India with her old cultureand new outlook, with her millions of men and women will have a great part to play,

against the giant. Star by star the glory of the Marathi stage is now disappearing, as most of the theatres are now fitted with cinema machines. Gujarat is to a certain extent holding its own as it has mastered the technique of adaptation to the rise and fall in all commodities, including the theatrical fare. Today it is making both ends meet with difficulty, at several places; but it is biding its time as it knows that a section of the public is bound to get sick of shadows sooner or later and to turn to the theatre proper. Again, the Gujarati-Urdu stage is, at several points, trying to take up the challenge by stuging extraordinary scenic effects and synthetic performances piling farce on tragedy, acrobatic tricks and music and dance on melodrams.

In the midst of these combined operations on the stage, we sometimes observe a contemporary social or economical problem handled. But what chance has a genuine problem got in the midst of gorgeously painted scenery, elaborate costumes and artificial grandeur of an ultra-romantic stage-atmosphere? No doubt, box-office success is often secured by these unnatural effects.

The new Marathi experiment of Natya-Niketana, with Jyotsna Bhole, is following a more sensible course. The technique is adopted with a fully realistic back-ground. Music and comic relief are introduced naturally in a few scenes in a play which, on the whole, boldly faces a social problem of today. It is a type of short and smart legitimate drama which has been heartily welcomed by the educated classes. The pity, however, is that a play of this level must be staged on Sunday mornings in a cinemahouse which may oblige the producer either for love or money! Such weekly performances only serve as a tonic for the legitimate theatre. Nevertheless, It must be admitted that Bombay is far behind schedule as it has very few theatres for the drama proper. There is hardly a revolving stage or a highly educated theatre-going public.

In the south, Andhra province is doing very useful work by organizing several Open-Air Theatres, especially in the villages. This community drama is the real theatre of the people. The old Comedy of Art has lost its traditional orientation to a very great extent. We must pour in some new wine into old bottles With the cinema and the radio, this openair theatre for the people is bound to play a very important role in the regeneration of the Indian theatre.

Apart from certain bold dramatic experiments, the professional theatre has not undergone any serious change in the course of the last fifteen years. Pauranie plays with certain traditional themes, especially with a marked contemplative pathos, still rule supreme wherever they can stand on their own in this age of cut-throat cinema competition. In the north, in spite of several good classic dramas in Hindi, there is not a single professional troupe staging plays in Hindi today. Schools, Colleges and Clubs do stage a few on occasions; but this divorce from the theatre proper is indeed detrimental to the growth of the Hindi drama.

II

THEATRICAL DEVELOPMENTS IN THE WEST
(1) England and America

For a profitable study of the above Indian scene In the light of our post-war planning on the artistic side. It may be interesting to have a look at the theatrical developments in the West after the First Great World War. The question is whether we can take certain leaves from the theatrical re-construction planned in England, America and Russia. As may be expected, during the last war and for some time after, the fighting forces and hard-worked theatre-going public naturally tried to escape from the grim realities of life by trying to drown their sorrows or worries in all sorts of excesses including rollicking farces, musical comedies, spectacular operas and revue types of plays. Distilusionment followed in the wake of war; and an attempt was made towards reconcilement with life by a sort of religious philosophy, viz. "The Lord hath given, the Lord hath taken away." Sometimes, a play of the type of 'Journey's End' would open a vista of the most painful aspect of war, without any female interest or background music or other relieving traits.

The truth is that war demoralizes many sides of life and fine arts are often seen at a great disadvantage. In fact, hardly anybody has either the patience or the psychological basis for a legitimate drama and music. Dance, farce, spectacle form the order of the day. At such a moment The British Drama League in London under the guidance of Geoffrey Whitworth rendered yeoman service. Amateur dramatic ciubs affiliated to the League were started throughout Great Britain and the community drama movement received tremendous impetus. The central library circuiated all types of plays, including English translations of foreign masterpieces and gave expert advice regarding the production of plays on such matters as scene-designs, lighting, costumes and acting. Again. dramatic competitions were encouraged when august personalities of the theatre-world acted as judges and prizes were offered.

Again, Mr. Grenville Barker and the Drama League made a genuine effort to start an English National Theatre. Government support was solicited in right earnest. A complete and comprehensive scheme was presented of a little experimental theatre on the one hand and a large popular type presenting the best in the national and international world on the other. The former would give full scope to the genlus of budding artists aiming at an altogether new orientation of the theatre, and the latter while preserving the English classics constantly before the public, by means of the repertory system, would present translations or adaptations of the very best plays of the whole world. Thus, the idea was to put England on par with several European countries which have a national theatre of their own.

Owing to several factors, such a national theatre has not yet matured into a living reality. The position in America does not differ radically as far as the professional theatre is concerned. There is often

not much to choose between the Broadway of New York:on the one hand and the West End of London on the other. America possibly tries to be more technically perfect by spending more lavishly on stage-settings and other paraphernalla. Nevertheless, two fundamental distinctions must be borne in mind, viz. Hollywood competition which makes it imperative for the theatre to renovate itself constantly and the development of hundreds of schools of drama in the Universities and other Institutions. As it is too weii-known, the Talkie has taken tremendous strides in its conception, policy, motive and organization. If the theatre has to survive this ordeal, it must find ways and means to continue to attract a substantial portion of the old theatre-going public. The American theatre has so far been able to maintain its own in the face of all the glamour of Metro-Goldwyn-Mayer, as we notice from a detalled study of a variety of many brilliant productions given in THE THEATRE ARTS, perhaps, the most important theatrical monthly in the English language,

In this struggle, the schools of drama help a great deal. Not only the detailed theory of drama is taught to the interested educated youth but every possible facility is given to budding artists, boys and girls, to actually make experiments in scenic designs, painting, architecture, music, dancing, acting, directing and 'producing. Eminent scholars, such as Professor Allardyce Nicoli, the greatest living authority on the drama and the theatre, are constantly carrying on their research in the so-called stage-laboratories and giving the benefit of their findings to the University amateur clubs which in turn maintain their useful contact with the professional American theatre.

### (2) Russia

Now, let us have a look at Russia. No doubt, the theatre of Mayerhold and the Moscow Art Theatre are the fountains from which spring all other modern streams of theatrical entertainment in Russia. Nevertheless, the Theatre of the Revolution, i.e. after October 1917, brushed aside the theory of the fourth wall and started the crusade for introducing theatre to the masses. Thus began the modern movement of the People's Theatre which is now making itself felt even in India. Under the Tsars, introduction of political problems meant Siberla, i.e. banishment, and it was impossible to aim either at a republic of the world of art or at a republic of workers and peasants. The new theatrical spirit of the Revolution demanded "a bare stage, constructivist" settings and acrobatic acting." The aristocratic refinement and cuiture were at a discount and brave ideas and still braver deeds were the order of the day. In Mayerhold's mechanized theatre, the actor shared the honours with the decor and properties, and in Stanislavsky's psychological theatre, the actor was assisted by both in erecting a distinct and powerful portrait. Both of these ideas had to give place to a new type of theatrical entertainment by simple and direct means. M. O. S. P. S. (Russian initials of the Moscow Trade Unions) theatre started providing education with enjoyment to thousands of Its members by telling the story in a primitive form of

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### III

### PLANNING THE INDIAN DRAMA

How do we feel as we look at the present Indian scene in the above perspective? How should our country struggle and achieve its artistic salvation? There is no Indian Drama League, no Indian University Schools of drama and no organic theatre of the people volcing the sentiments of a national Government. When the English theatre itself is inorganic fie. not closely related to the British Government, how can we progressively move towards an ideal consummation of the Russian type? Again, in spite of several occasional promises, England herself has not yet secured a subsidy from the Parliament; nor has she been able to build a national theatre of her own.

We read and hear of post-war planning in many directions; but it is indeed a pity that cultural evolution and artistic renalssance generally come last in the list. Naturally, political and economic freedom is the fountain-source of all good and beautiful things. A nation should, however, organize itself and struggle in the up-nill task of an all-round progress. We must make our very best effort to herald a proper artistic evolution. England herself is not waiting with folded hands for a Parliamentary boon. Why should we not ourselves move rapidly on the road to proper discipline and organization in the theatre and set our own house in order?

In the present thentrical chaos, we must seek the kindly light left by some bold amateur experiments in several parts of the country. As they are, however, generally related to a limited number of educated upper middle classes, we must look to another casis in the desert, viz., the Indian People's Theatre Association.

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hearts can rouse the masses from a souliess formalism and make them dance with loy. Efforts are made in various directions. For instance, the Progressive Writers' movement is making a commendable effort to defend cuiture against all tendencies of Fascism and Impenalism. As literary masters are fighting such menaces on paper, Udayshankar is presenting ballets like "Rhythm of Life" and "Labour and Machine". The new drama of this Association aims at a distinct "departure from symbolism and the exaggerated, vulgarised love themes of middle class writers."

The model adopted is of the famous Chinese People's Theatre staging progressive plays throughout the country and "educating and enthusing the people to action." Only a strong People's Theatre movement can rouse new hope and faith among the farmers and factory workers. It is freely admitted that at present our nation is to a great extent paralysed by despair and confusion and that a Herculean effort will be needed to electrify the community by a bold and convincing artistic revival of drama, songs and dance. Again, It is essential to build the new edifice on a solid ancient foundation. Thus, the movement aims at reviving our great cultural heritage " by re-interpreting, adopting and integrating it with the most significant facts of our people's lives and aspirations in the present epoch."

For this purpose of making the masses conscious of their heritage and of enlightening them about their rights and the solution of their problems, folkdances, songs, bailads, ballets, pageants and plays of varied types will have to be pressed into service with the aid of those intelligent farmers, workers and students in whom there lies a spark of latent genius. Recent experience has demonstrated that worker and peasant squads who come from the far-flung provinces for the culture festival can attain a high artistic level, in the true fashion of the 'Commedia Dell' Arte.' The 'Yatra' of Bengal, the 'Bhavai' of Gularat, the 'Lalita' of Maharashtra and the 'Kathakali' of Malbar have made a distinct contribution to the theatrical enjoyment of the masses along with the 'Ramalila' and the 'Rasdharis' of the North. The problem before the People's Theatre movement is to give such a complete re-orientation to these popular indigenous forms as to make them fully acceptable in these days, not only to the village community but also to the educated public.

For the proper development of this village community drama we may have to learn much from the collective farm theatres of Russia and the American Folk Theatre. As we have seen, the former has adopted the realistic base for the new drama and theatre. Moscow gives a lead to the farm theatres producing the plays of Gogol, Ostrovsky and Gorki, Probably this co-operation with the town theatres assures the highest artistic standard. Great stress is laid on the unlification of audience and actors, the guiding principle being that the theatre should always keep its finger on the pulse of the audience. On several occasions an Olympiad of dramatic competitions and festivals of music is organized giving fullions and festivals of music is organized giving full

scope to vocal and instrumental music, dances, sketches and dialogues. Of course, two major factors contribute to this grand success of the Russian People's Theatre, viz., firstly, the state is determined to spread this love and knowledge of the theatre even to the remotest corner of the vast Republic; and secondly, to meet this new curiosity and eagerness of the masses, fullest voluntary co-operation of the professional theatre with a village farm or factory drama is always forthcoming.

In the capitalistic country of the U.S.A., there are cless than 30,000 theatres of one sort or another, created by the people themselves, apart from about 250 commercial theatres using professional talent, mostly centred in New York and Chicago. It is claimed that this Folk Theatre is the theatre of the United States, not the theatre of Broadway or of Hollywood. Now about 150 colleges and 7,000 High Schools give courses in play production; about 13,000 schools have dramatic clubs. From the Atlantic seaboard to the Pacific there are in all 65,000 amateur groups. Again, the large Universities like Harvard, Yale and Princeton have nurtured native drama and staged crecellent annual shows.

Professor G. P Barker opened in 1912 his famous '47' workshop, State Universitles and some agricultural coileges "have been mailing out 'package libraries' of drama, and have been teaching farmers and villagers to stage pageants, harvest festivals, plays and dramatic tournaments." Consequently, in the rural regions, music, drama, folklore, games, folk dances, literary interests, painting and sculpture are seen flourishing. Mr. A. G. Arvold of the Agricultural College in Fargo, North Dakota, has converted an old chapel into the famous Little Country Theatre. visited by celebraties from all parts of the world. It also houses one of the finest libraries of dramatic literature. Old books, prints and play bills autographed by famous dramatists and artists form part of the collection. Mr. Arvold "sends out coples of festivals, pageants, plays, readings, dialogues; pictures of floats, parades, processions, exhibits; plans of stages, auditorlums, open-air theatres and community bulldings where shows can be given."

India will be specially interested in the American agricultural pageants such as "The Land of the Royal Corn" and "the Enchantment of Spring." Again, we may take another leaf from the American community dramatic enterprise: Marionette companies tour the country in miniature repertory; and "Town and Gown" dramatic groups unite several University students with local townspeople. In our country of bright sunshine almost all the year round and beautiful natural background, the new American model of open-air festivals, pageants and religious dramas-may indeed prove very useful.

### What About The Children's Theatre?

We have been thinking about farmers and workers and University students; but what about the children's theatre? Moscow has solved the problem through the Central House of Children's Art Education. It has branches all over the Soviet Union and teals in child-education in "theatre, music, fine arts, radlo, literary creativeness, self-activity, and daning." They organize the distribution of radio sets and chema outfits to schools and also sponsor big Olympiads of children's art and publish thousands of copies of the winning songs. The Central Puppet Theatre was organized in 1931. About half a dozen actors and three musicians form a group of directors. Once a master begins to play with his mercurial ringers on the strings of the dolls, "sheer magic fills the theatre." All large cities have theatres for children; small towns create these; and travelling units visit isolated villarge.

The Commissariat of Education quickly found a repertory of little plays for little folk, especially consisting of dramatized fairy tales and adventure storles. Of course, it is indeed a matter of profound joy to observe an eager and enthralled audience of children. They are encouraged to come an hour earlier and they are taught games, songs and dances in the large fover of the specially designed theatre. "The spirit of the mass games in the fover is carried -on to the stage." Scientific workers carefully observe in the theatre where and why the children laugh or are bored or held in suspense or make "a vocal contribution to the performance." Again, "norms of duration of performances for different ages have been worked out: the sultability of some kinds of performances over others, the amount of perception of realism and symbolism in a production has been recorded." Two conclusions drawn from such records may prove of universal interest, viz. first, though -comedy makes the deepest immediate impression, it is forgotten and only the drama is remembered; and secondly, "the wild, temperamental child at school more easily remembers the sequence of scenes in a theatre than the dlligent orderly child."

This is all wonderful. Undoubtedly, the enthuslasm for the theatre in Russia and America is unbounded. Their all-embracing mighty organizations perplex us in the extreme as we think of our country and its almost insoluble varied problems. There is throughout India today a cry for rural uplift. One section carries on the campaign of "Back to the land"; others are in favour of complete industrialization. There are several all-India organizations .aiming at the social economic and cultural regeneration of our country and Mahatma Gandhi gives them a great lead both by example and precept. It is freely admitted by all students of Indian problems and by the workers that the Indian renaissance must be based on the fundamentals of Indian tradition, culture, conventions and time-honoured institutions.

Fortunately, now, India is gradually becoming conscious of its great heritage and is trying to build on solid foundations. Young students, who with their pseudo-Western training were turning away in disgust from the dirty, squalld and miserable village-life, are now induced to go there as missionaries writing for the salvation of the motherland. Useful Western methods and a proper disciplined approach are brought to bear on the new organizations. Efforts are made to reduce the grinding poverty of

the masses and to ameliorate their lot in every possible way. Town people are now being brought into closer contact with folk-lore, folk-songs, folk-dances and the village comedy of art. A tremendous drive throughout the country by the congress workers has revived many handicrafts and art forms. Country bards are given a rousing reception in the cities and people are enthused by the village times. Numerous exhibitions in the country open new channels of trade and commerce for the village community; and architects, poets, painters and artists study the life in the country with a real sympathy and understanding.

# IV MEANS AND CONDITIONS OF REVIVING THE DRAMA

What we indeed lack today is full co-ordination and proper organization for a genuine art-revival throughout the country. For this purpose the educated youth should give a distinct lead. After all, mature plays can only be built up by the full co-operation of discerning audiences. It falls to the lot of the modern youth to take the initiative in the countrywide drive for mass education. A certain amount of education is essential for the growth of the theatrical arts. Once the percentage of literacy goes up, Indian Drama Leagues in certain provinces can do much useful work in various ways. In the first place, our time-honoured indigenous art forms will have to be not only revived but reinterpreted to sult the modern scientific age.

### (1) Transforming the Village Play

For instance, in thousands of villages the medieval 'Comedy of Art' still flourishes. The principal aim is to excite unbounded merriment, among poor illiterate groundlings, by all means fair or foul. Farcical, vulgar satires or lampoons are freely used by village actors who have never undergone any artistic discipline. Next to many love-intrigues, laughter-provoking devices of disgulse, mistaken identity and crudely licentious jokes, the love of music, dance and spectacle proves to be fascinating in such village dramas. The pity is that in splte of its wonderful sense of the theatre and sparkling melodramatic situations, this comedy of art has remained divorced from literature. Such performances never had the benefit of free or informed criticism. Thus, the breach between pure literature and the popular theatre widened. It is for the modern educated youth, with a patriotic mission, to bridge this gulf. As some of our young social servants go "back to the land", they should purify and ennoble this vil-lage drama. For they would find ample material for the dramatic art in the sacrifice and heroism of the village people, touched by the patriotic fire. "We see the poor peasant risen to a towering height of strength, by his renunciation of all that has been dear to him-his land, his lodgings, his cattle. We look with admiration at the Indian woman,-the timid peasant girl who would not dare utter a word in disobedience to her husband - out on the war-path against the Imperialistic regime at the cost of her

life. Her greatest joy is the darshan of her masterpatriot. Those last words of a dying woman in the village, Cover me with a piece of pure white khaddar when I go, will always remain with us. And in, the moving story of Satyagraha, there is one piece after another of heroism which the dramatist can well weave into his plays."

#### (2) Developing the Realistic Play

Our students will have to take up another powerful stand in favour of the realistic play. We have been used to ultra-romanticism mixed up with crude realism, farcical devices, popular songs and what not in most of the city theatres. Educated boys and girls must stage a swing back to theatrical realism on a three-dimensioned stage. For the development of legitimate drama in our country, the technique of the fourth wall will have to be followed. As the curtain rings up, we must indeed feel the actual atmosphere of the spot so as to induce in us "the willing suspension of disbellef." This atmosphere requires training and discipline and hard study of all the fine arts of the theatre. Only a central school of theatrical arts can train our youths in the right direction. These trained artists can specialize, according to their individual urge, as actors, musicians, dancers, painters, playwrights, directors or producers.

Under the auspices of a provincial Drama League they can stage model plays with complete realistic settings. A few touring companies of these amateurs who may turn professionals may tour in the country and may give Hindustani versions of some of the most popular plays in their repertory in their mother tongue. These productions on a purely realistic basis will give a new orientation to the popular professional theatre. At an earlier stage, financial and other difficulties are bound to crop up. It may be extremely difficult to secure a Government subsidy for this type of artistic renaissance. If, however, school, college, hospital and other endowments are often coming forth, why should we despair of some sort of encouragement for an artistic regeneration of the country, in the manner of the Abbey Theatre of Dublin?

#### (3) Evolving the Bailet

And, what about our old and deep love for music and dance? To satisfy this aesthetic need for the vast community, the ballet form is gradually bound to come to its own. Good old stories which have a basis in sound religious belief, social convention or historical tradition are being now beautifully interpreted by means of symbolic dancing and back-ground music, with or without songs. For instance, Mr. K. M. Munshi's "Jaya Somanath", a recent Bombay production, proved an artistic success. This fascinating theatrical variety of the ballet has an immense future in a country with a babel of tongues. Great Indian artists may start their schools of music and dancing in the manner of Uday Shanker in several parts of India; but the main question is of co-ordination of all such efforts with a view to secure an " ; all-India artistic appeal, Such an organization

should facilitate a harmonious development of the various schools of dancing and interpretation of the great Indian epics, myths, folkiore, stories, historical events or novels and plays.

#### The Need of Encouragement

Thus, the realistic drama and the ballet need a most serious approach both by the amateur clubs and professional companies. Unfortunately, we do not for the moment find such earnestness and sincerity all around as to justify an Immediate fructifleation of an artistic renaissance. In fact, thecinema houses throughout the country are often seen debasing or demoralizing the atmosphere to an appreciable extent. Naturally, the commercial theatre enters a vicious circle by trying to appeal by cheap and foolish clnema stunts and follies. Amateur experiments to raise the tone of the entire community should receive the fullest co-operation and wholehearted support of public bodies like Municipalities and local boards. It is no use finding fault with an apathetic, alien bureaucracy. There is nothing to prevent our local bodies from encouraging our indigenous arts and crafts Central organizations on a purely co-operative basis may do a world of good in the direction of giving proper encouragement to such forms as the realistic drama and the ballet, on the one hand, and lending genuine support to such great Indlan films as "Rama-Rajya" and "Ramshastri." by awarding academy prizes, on the other. Again, such civic bodies with a patriotic zeal and artistic earnestness can inspire a world of confidence in the dramatists and artists in their great effort to tackle seriously the fundamental, social and economic problems of this vast but poor continent, now fallen on evii davs.

#### V BUILDING THE FUTURE

Naturally, in these days of "Post-war Preambles", we dream of the drama and the theatre of tomorrow in India, on the lines of organized village community drama, co-ordinated Drama Leagues, schools of drama and allied theatrical arts. stateendowed Art Theatres for the farmers and workers and also for school children and perfect co-operation between the screen and the legitlmate drama. In the course of time, India will undoubtedly developall these, as she marches heroically forward on the road to self-governing institutions. At the same time, for our artistic renaissance we cannot, with profit, plant an exotic plant on our traditional soil. We must build on our own solid foundation. We are used to the harmonious development of various sentiments or 'rasas' in the course of a masterpiece like 'Shakuntala' or 'The Toy Cart,' wherein one predominant sentiment, supported by several accessories leads to the artistic unity of impression. Again, verse music has been an integral part of the dramatic technique. Throughout every play, generally, numerous beautiful lyrics tone up the nerves or exhilarate the spirits. Moreover, farcial characters: scenes or incidents are cleverly interwoven in thetexture of the play. The Hindu theatre, all through.

<sup>\*</sup> From Indian Horizons by H. D. te una.

the centuries, has maintained its own standards of morality and its own conventions. Some of these conventions are, no doubt, more honoured today in the breach than in the observance.

Nevertheless, the fundamental fact remains that the Indian theatre will always popularly retain its synthetic character, i.e. it will try to combine tragic and comic elements along with dance, music and acrobatics. The development of several distinct species such as a great tragedy, a pure farce, a musical · comedy, a grand opera and so forth will depend on the level of the education on Western lines of the theatre-going public in the various provinces. In a poorly organized country with serious economic handicaps and colossal ignorance, it is extremely difficult to advance rapidly in the theatrical arts. Consequently, one does not see a very bright immediate future of the professional theatre, the community drama and the educational theatre in their purposes, techniques and material equipment. Even in the West there is a general complaint that since Ibsen and Chekhov and the heydays of Shaw and -O'Neille, musical comedies and 'revues' are ruling supreme in many big cities. On the other hand, "every feature of motion picture production has steadily improved in technique, equipment, acting, direction and the adaptation of the literature of the past and present to the industry's medium."

In these circumstances, we shall have to proceed cautiously and educate the public mind. Living interest will have to be created in the educated people who have noticed a complete divorce between the debased popular theatre and the literary drama proper. Synthetic productions with ever-increasing

artistic appeal will be required to arouse enthusiasm in the masses. Amateur experiments must lead the way, with tactful and sympathetic co-operation with the indigenous theatrical forms in all parts of our country. With the co-operation of the chema-show and the radio-play, the legitimate drama will have to secure working understanding in order that all the forms of popular entertainment may secure proper artistic appeal and serve the great purpose of an artistic renaissance of this socially, economically and artistically backward country.

Today's theatre is a part of our complex political, religious, social and economic life. The War is over, but owing to its impact, our life is bound to undergo certain radical changes; and we may clearly realize that what was really good for our fathers and grandfathers may not indeed prove so good for our children and grandchildren. In modern architecture, in electricity, in acoustics, in heating and cooling devices, we may develop a new orientation which may change the basis of our theatrical experiments. Thus, it is very difficult to plan out a new Indian theatre on a national basis. Highly advanced countries have not still fully made up their minds about their post-war national theatres. We, therefore, situated as we are today in every respect, must be prepared to pass through a slow and painful period of transition. For an immediate model, the Irish theatre, with its patriotic zeal, symbolic settings and lyrical fascination, might suit us admirably. Of course, what we can do is to prepare as best we can, with all the earnestness, sincerity and catholicity of mind at our disposal, for an artistic renaissance and then wait and hope!

## THE OUTLOOK FOR INDO-ANGLIAN LITERATURE

#### K. R. SRINIVASA IYENGAR

K. R. Sriniana Iyengar, M. A., D. Litt. (Madras) Vice-Principal and Peofessor of English, Bastict, sheer College, Rogalkol, has published a large number of books, the most vell-known among them being Lytton Strackey, A critical Momer, Indo-Angiana Literature, 'Literature and Authorship in India', 'S. Sriniana Iyengar: the Story of a Decade of Indian Politics', 'Sr. Aurobindo', 'On Beauty' and 'The Indian Contribution to English Literature'. A distinguished critis, he contributes articles regularly to more than one yournal. He has also to his credit stories and critical essays in Tamil, but his most assured piles vi among the Indo-Aughman as the weedler of a fine and terratile pen in English.

Written with a charming combination of actimen and enthuneam, Prof. Lyengar's essay is a fluent wind survey of past and present tendences in Indo-Anglian thireature and a gathering up of them in all their variety to form an indica to things to come. The planning of this fatistiating product of Indice's contact with the English mand and with the English tongue is considered both from the organizational and the costs tends, the press and cone of the value of the foreign language used are weighed and the best conditions postulated for the full flowering in to Indian fiction, drama, criticism, political and philosophical thought and, above all, perfort. In porting, according to Prof Lyengar, the most original and grapping expression will be charged with mystical spih. Not that other kinds of sight will dustilled and fade three will, on the contrary, be an optimal display of every aspect for unature, but the mystic's up being most naturally connected with the core of the Indian consciourness, is bound to open the widest and rectal the locatest values. In looking abond, Prof. Lyengar has no Unit spots belance and wideness mark his vision, but he has also a sense of proportion and a right disposition of trests.

NE of the Interesting consequences of the British Impact on India is a miscellaneous body of writing that is comprehensively described as "Indo-English Literature". A detailed and authoritative survey of Indo-English literary relations has yet to be attempted, but it must be clear even to a casual observer that there are two distinct streams of literature inspired by this straoge commincing as well as clash of two great cultures.

#### ANGLO-INDIAN AND INDO-ANGLIAN

In the first place, there were the Britishers in India — a considerable and, every year, a growing number — who desired, as they desire even today, to augment the munificent literature of England with fitful writings of their own; Sir William Jooes, John Leyden, Sir Edwin Arnold, Rudyard Kipliog, and Edward Thompson are among the many enterprising writers who have secured for "Anglo-Indian" literature a distinctive niche in the temple of English letters.

In the second place, there were the Englishknowing Indians — at first a meagre number, presently numbering in tens of thousands and millions — who desired, as they cannot help desiring even today, to make English a convenient medium for interprovincal communication: in other words, something

of a national language. Some went further and boldy made a bid for the laurel bough, they lisped in English numbers and, wonder of wonders, the numbers came, and some others still sought self-expression through the forms of drama and creative fiction. This is how today we have a respectable bulk of "Indo-Angilan" literature that has aiready, in mass no less than indubitable merit, thrown into the background "Angio-Indian" literature.

One thing, however, we should not forget; the glories no less than the humiliations of the past are. after all, of little account today, for, as Sri Aurobindo reminds us, "we do not belong to the past dawns but to the noons of the future." Standing as we do in the wake of a sinster movement in human history now catching in the dim distance the gruesome shapes of penury and disintegration, anon sighting on the far horizon bright visions of an ordered and purposive future—we cannot, we must not, surrender the privilege of looking before and after, and pining and planning for what is not; to ponder, perchance todream, to give vent to our hopes and aspirations, to structure the golden mansions of the near and remotefuture,-these are Man's inveterate but life-sustaining recreations! Very well, then! - how about the "future" of "Indo-Angilan" literature?

Let us, however, do a bit of stock-taking first. "Angio-Indian" literature Itself is hardly two hundred and fifty years old. It began with Jones and Leyden towards the close of the seventeenth or at the commencement of the eighteenth century when, out of the mass of traders, careerists and administrators, some at least were willing and eager to explore and respond to the imaginative richness and bewildering variety of Oriental culture. A cross-fertilization of two fruitful cultures seemed lmminent, but, as a matter of fact, the Anglo-Indians refused to rise to the occasion," Jones and Leyden, Lyali and Arnofd. made a promising beginning, but the beginning was almost the end. .The Anglo-Indians, even when they were men of good will, were generally oppressed by a sense of racial superiority; and this effectively ruled out any real fusion of the two cultures. Self-conscious, unattached to the seething world of Indlan India, lacking alike faith and vision, the average Anglo-Indian writer lost himself (to quote Mr. E. F. Oaten) "in the rocks and forests of inanity and purposelessness." Books like Forster's "A Passage to India" and (at the other end of the scale) Nichois's "Verdict on India" are accidents in English literature rather than meritorious or damnable exhibits of Angio-Indian literature. Under the pressure of events' the stream of Anglo-Indian literature must inevitably dwindle more and more and ultimately cease aitogether. Fright per co

THE LITERARY RENAISSANCE: Early Efforts

Indo-Anglian literature registered its first convillations and articulations over a century after Sir William Jones landed in Calcutta. During the 16th and 17th centuries there was in this vast sub-continent, then slowly coming under the sway of the British, little organized education of any kind; no large-scale attempt was made to bridge the widering gap between the few scattered traditional Pundits and Maulvis and the teeming illiterate Trustrated millions. An uninterable lethargy, at once physical, intellectual and spiritual, possessed the body and soul of the Indian people, and the stream of Indian culture seemed to have disappeared in the quicksands of the national enslayement.

The fog lifted at last. The impact of the West, while it no doubt gulckened the national discomflture, gave us at the same time three needed impulses: "It revived the dormant intellectual and critical impulse; it rehabilitated life and awakened the desire of new creation; It put the reviving Indian spirit face to face with novel conditions and ideals and the urgent necessity of understanding, assimilating and conquering them."\* Raja Rammohan Roy, a Titan possessed of vision and fertility of resource, saw in clear outline the new virile India of his dreams and strove hard to realize it here and now. With the help of two Englishmen, David Hare and Edward Hyde East, Rammohan organized the Calcutta Hindu College. He wrote in Bengali, he wrote in English; he encouraged the educational activities of the Christian missionaries; and he paved the way for Macaulay's

"Minute", the "Filtration Theory", and the modern system of education through the medium of English.

Rammohan and the ploneers were idealists who believed honestly that a fusion of the best in the two seemingly allen cultures was desirable and possible. To be "modern", to know English, was not certainly to be un-Indian, to turn a traitor to one's own mother tongue; India had much to learn from the West, our languages too had still to learn the virility and elasticity of modern European languages like English, French and German; and Rammohan felt convinced that if India returned the appropriate response to the historic challenge, a cultural integration would result and the "two minds shall flow together."

The earliest writings of the Indians in English were in prose, Pamphlets, travel-books, and translations appeared, first in Bengal, then in Bombay and Madras. And poetry came, so to say, "tumbling after," To Kasi Prasad Ghose goes the credit of publishing the first volume of Indo-Anglian verse, "The Shair and Other Poems" (1830), though there is little intrinsic merit in the book itself. His contemporary, Henry Derozio, was a genuine poet, Derozio was half-indian, half-Portuguese, but spiritually he felt'one with India and aspired to be her National Bard; he wrote many sonnets and lyries, and a long marrative poem, rather in the Byronic manner, entitled "The Fakir of Jungheera"; and he died, hardly twenty-two years old, in 1831.

As fresh experiments in education increased the number of English-knowing people in the country, the Indo-Angilans too found a fast-growing audience to appreciate their writings. At first Indo-Anglian journalism attracted some of the best brains in the country. The establishment of the Universities in 1857 introduced Indian youth, really and truly, to the treasures of European thought. Two or three decades passed -- a whoic brave new generation pole-vauited through the flery leaven of liberal education-it llsped the language of Milton and repeated the periods of Burke - and at an auspiclous moment Indian Nationalism was born. And in those days Indo-Anglian journalism seemed to be the best means of propagating the new alluring gospei of nationalism. No wonder Indo-Angiian journalism claimed the aileglance of eminent publicists and statesmen like Shambhunath Mukherii, Motiial Ghose, Surendranath Bannerjee, G. Subramania Ayyar, Parameswaran Plilai, Dadabhai Naorojl, Mahadey Govind Ranade, Behramil Malabari, Bal Gangadhar Tilak and others too numerous to catalogue here.

The Indo-Angilan poets too were not Idle: Derozio was followed by Madusudhan Dutt. There were a number of copious or meritorious versifiers, when Behrampi Malabari came out with a book of English verse in Bombay and we are already in the middle of eighteen seventies! Madusudhan died, aged fortysix, in 1873; the marvellous fragile sisters, Aru and Toru Dutt died in 1874 and 1877, aged respectively twenty and twenty-one. Both were little princesses of song though it must be admitted that Toru has left behind her a greater quantity of finished work than the 'elder sister. Toru's amazing bill of achievement

<sup>.</sup> Sii Aurobindo, "The Rensissance in fidis," p. 31.

includes a novel 'in English, a novel in French, many magazine atticles, numerous sensitive letters, and the scores of poems included in the two published volumes, "A Sheaf Gleaned in French Fields" and there is no doubt that not only the tragedy of her atta-crossed life but also the measure of her achievement, will ever preserve her from proud "Oblivion's curse."

#### Later Movements

Toru Dutt's work found enthusiastic admirers in England no less than in India and it was clear now that Indo-Anglian poetry had emerged out of its nonage. Romesh Chunder Dutt's verse renderings of the 'Manayana' and the 'Mahabharata' were achievements of one kind; the early lyrics of Manmohan Ghose and Sri Aurobindo, Nagesh Pal's metrical romance "The Angel of Mistortune" and Sri Aurobindo's 'Urvasle' and 'Love and Death' and a little later, the lyrics of Sarojoin Naidu and Harindranath Chattopadhyaya, all were varied triumphs that gave Indo-Anglian poetry an honourable place under the sun.

The award of the Nobel Prize for Literature to Rabindranath Tagore in 1913 is a landmark in the history of Indo-Anglian literature. Though the honour really belongs to Bengali literature, Indo-Anglians too claimed a part of it and the award proved an aimost perennial inspiration to young aspirants for literary honours. Meanwhile, Tagore's works in their English dress gained a world-audience by their haunting, delicate, visionary excellence; he made a round-the-world tour, and the figure of the poet, with flowing beard and immaculate white dress, became symbolic of the Orient, its strangeness and its mystery no iess than its beauty and its poetry, Apart from the Bengali poems that he Englished, Tagore also did much original work in English such as "Sadhana", "Nationalism", "Personality", "Creative Unity" and "The Religion of Man", all in prose, as also one very characteristic and beautiful poem, "The Child".

Presentiv India, ilke the rest of the world, went through the four dreary years of the First World War and found herself on the threshold of a new era rich with singular possibilities. Phirozshah Mehta was no more, Gokhaie was no more, Tilak was no more; hushed was Bepin Pai's fiery eloquence: Surendranath's periods jost their old magic; and Sri Aurobindo was a reciuse at Pondicherry. A new scene opened and Gandhiji dominated it from the beginning, Indo-Anglian journalism became crisper and more pointed, our orators were brief and emphatic and our prose writers attempted to shake off the Macaulayan tyranny and sought more natural forms of persuasive expression. And, little noticed at the time, Sri Aurobindo's great philosophical monthly journal, the "Arya", ceased publication in 1921, after appearing regularly for a period of about six and a half years.

The twenty years wedged between the First and Second World Wars saw much activity on the part of the Indo-Anglians. Poets — their name was legion,

and among them Harindranath Chattopadhyava shone with great brilliance by his colourful surprizes of spiritual idea and feeling; there were fine novelists like K. S. Venkataramani, Muik Raj Anand, Dhan Gopal Mukherii and Shankar Ram: gifted dramatists like V. V. Srinivasa Iyengar and T. P. Kailasam: sparkling essayists like "S. V.V." and R. Bangaruswami; a reflective litterateur like A. S. Wadia whose "Messages" of the world's prophets constitute by their boid interpretations and distinguished style a fascinating series, the finest of which is the one praised by Chesterton, "The Message of Zoroaster"; a journalist like D. F. Karaka pugnaciously "Going West" as well as championing the East, exposing Indian foibles as well as constructing that sympathetic vivid survey of Gandhi, "Out of Dust"; and there were, besides, Mahatma Gandhi, Sri Aurobindo, Professor Radhakrishnan, the Rt. Hon. V. S. Srinivasa Sastri, Pandit Jawaharlal Nehru and Sir Jadunath Sarcar, writers whose mastery; over English became the envy and despair of Indian and Englishman alike. Sri Aurobindo's "Essays'on the Gita" came to its readers with the freshness of a new revelation; Radhakrishnan's Upton and Hibbert Lectures were acciaimed to be "as eloquent as they were profound"; and Jawaharlal's "Autobiography" became a best selier in the Old World as weil as in the New.

#### Recent Activities

And then Hitler invaded Poland, and overnight we were all involved in another, an even more terrible. totalitarian war. But the war did not damp the enthusiasm of Indo-Anglian writers and publishers: the very opposite may almost be said to be the case! Hardly had hostilities begun, hardly had hell seemed to have broken loose over land and sea and air, when the first volume of Sri Aurobindo's "The Life Divine" -wasn't there an audacious challenge and a curious appropriateness in such a book with such a title appearing at such a time? -- came out in November 1939; the second volume appeared in two massive Parts soon after, in July 1940, and this vast prose symphony of spiritual experience set to philosophical purposes for mankind's evolutionary needs was presently hailed by the late Sir Francis Younghusband as "the greatest book produced in my time." Two years later, on the auspicious occasion of his completing seventy years in this sublunary sphere, the two sumptuous volumes of Sri Aurobindo's "Coilected Poems and Plays' appeared and compelled instant recognition as the most virile and variegated achievement of the Indo-Anglian muse. A master-speech indeed was in his superbly sustained narratives in blank verse, his exquisite or puissant translations from Kajidasa. Bhartrihari and Chittaranjan Das, his countiess short poems of shining depth, his sounding with frequency the rare Upanishadic note of intense immeasurable spiritual suggestion, his triumphs of inspiration and art in the field of quantitative metre where most English poets have come to grief. Indo-Anglian literature was to be no more a literature under sufferance: it had incontestable title deeds at last and this was formally recognised when Sir C. H. Reddy declared in the course of his generous "introduction" to the

"Indo-Angilan literature is not essentially different in kind from Indian literature. It is a part of the in kind from Indian literature. It is a part of the in momentum from the Vedas, has continued to spread its mellow light, now with greater and now with lesser brilliance under the inexporable vielssitudes of time and history, ever increasingly upto the present time of Tagote, Iqbal and Aurobindo Ghose, and bids fair to expand with our and our humanity's expanding future."

Although the sheer strength and Himalayan amplitude of Srl Aurobindo struck the eye at once and held it in thrall, there were not wanting other minor eminences, promontories and rivulets, and these, too, in their own several unique ways, diversified and enriched the Indo-Anglian literary seene. Mr. K. D. Sethna published in 1941 a collection of lyrics entitled "The Secret Splendour," and at one bound he took his place among our authentic Laureates of the Spirit. Again and again we find him plunging into the mystical whiripools of the Unknown - plunging, and anon returning with pearls of great price! His brother, Mr. H. D. Sethna, has more recently (1944) brought out a slender packet of "Struggling Heights," and he also turns his poems into sensitive crystals that reveal life's significances with sureness and subtlety. A sister to these two, Miss Minnie D. Sethna, has vouchsafed to us in print no more than a few brief glimpses but they are of realms of pure gold and make us hope she would let her mysticism find tongue more often. Nolini Kanta Gupta's "To the Heights" is another striking collection of poems; prayer and ecstasy flow into each another and galvanize most of the fortysix pieces in the book and, indeed, these lyrics eloquently summon the questing soul to the sun-lit heights of Realization. Punjalal's "Lotus Petals" is a small bunch of delicious promise; 'a childlike spontaneity breathes here side by side with a keen awakened soul-urge. Among the soon-to-be-published, Dilip Kumar Roy's beautiful pieces of aspiration and devotion and passionate penetrating wisdom under the title, "Eyes of Light" hold pride of place for their many-mobded many-metred voices from within.

The excruciating war years heard also other melodies - the safe sane notes of Tradition as also the sucers, snarls, curses and cacophonics of Revolt ... The collected cdition of Sarojini Naidu's work - "The Scoptred Flute" - brought from the past a rich magic, at once swift and shimmering and soothing, that was much needed by our trangled nerves; it was a reminder, too, of her indubitable place in the front rank of our singers. Armando Menezes, professor of poetry, published two volumes in quick succession in the early years of the war - "Chords and Discords" and "Chabs and Dancing Star"; he is a poet of tradition, and truely and unquestionably a poet - one who has an admirable mastery of expressive turn and rhythin in English and from whom a deep delight cart be expected. Mr. S. R. Dongerkerry is another traditionalist who has both faith and vision and who

finds in the eternal verities and perennial human values ample subject for his limpid and home-spiin melodies; no wonder his recent collection of felicitous poems, "The Ivory Tower," came as a refreshing contrast to the verbal gymnastics that only too often do duty for "superior" poetry. There is unfortunately no space, here to speak of the many other Indo-Anglians who have given us of late the chaste and chastened rhythms of immemorial tradition. But Fredoon Kabrali compels mention: "A Minor Georgian's Swansong," published recently in England where the poet lives, has many graceful as well as vigorous moments that have made English critics sit up and take notice; it is, in the main, finely free of the loud and abrupt gestures which are in vogue, but here and there it adapts even them to happy effects. Professor V. J. Bhlishan also cannot be omitted - he appeals by a bright-hued phraseology taking" various free forms without losing significance, refinement and balance. Lastly, n word is not out of place for the largely unpublished Mr. A. K. Sett writing free verse with some genuine feeling and elegance.

On the other hand, our poets of revolt - the poets who delight (in Mr. Cyril Modak's expressive phrase) in the "bivounc of battle" - the progressive. emancipated, modernist, may, futurist poets - these too are no less active and no less articulate. Manjeri Isvaran's "Catguts" and "Brief Orisons" came out in 1949 and 1941 respectively, P. R. Kaikini's "Snake in the Moon" - a marked contrast in temper and tone to his earlier work like "Songs of a Wanderer" which had a dreamy irised atmosphero of, at times, authentic merit - appeared in 1942, Krishnan Shungioo's "the night is heavy" and Bharati Sarabhal's intriguingly woven, complicatedly symbolic and moving "The Well of the People" came out in 1943, and Nilima Devi's "When the Moon dled" appeared a year later. The world crisis sits heavily upon them - and, while they no doubt burn incense at the shrine of the later Yeats and Rimbaud and Ellot and Auden, they are at the same time Indian to their heart's core; many of them practise free verse, and in their hands free verse in some measure justifies itself. There are also other "modernists" who are content to produce their calculated effects through traditional verse moulds; among them Cyrii Modak stands high for his several occasions of poignancy and strength. In short, the Indo-Anglian "leftists" are on the brink of great possibilities and their output is already rich in stern and strident qualities.

Besides poetry, other forms of literature also are statements of the presence in our country of large numbers of American soldiers has given currency to many pointed Americanisms, and some of our brighter journals are nowadays written in the breezy American rather than the restrained English manner. Our columnists — from Pothan Joseph to the three Taleyar-khans (Frenc, A. F. S. and H. J. H.), from "Dim" of the "Chronicle" to "Little Man" of the "Sentinel", are entertaining, pungent and public-splitted;" our humourists and satirists — Bangarussami, Juseph John, N. G. Jog are very good company, the last-

named baving a certain creative drive; such a drive is also K. Ahmed Abbas's, while our nationalist editors, from A. Brelvi the veteran master of long-range strategy to young "blitz" Karanjia wield versatile provocative pens.

Notwithstanding wartime controls of all sorts, Indo-Anglian literature thus branched out in diverse directions during those few tempestuous and terror-haunted years. As yet another bright dawn chases beyond the hills the night's shadows and frustrations, we can always hope to be agreeably surprised by exhibarating facets - radiant, fresh, rainbow-tinted facets of the panorama of Indo-Anglian literature; and we shall be more than ever gratified to discover in it such abundant signs of life, light and invigorating youth. The "letters" of the Rt. Hon. V. S. Srinivasa Sastri - a new novel by Ahamed Ali, Karaka's "Chungking Diary" - a critical essay by Bal Mardhekar - a political pamphlet by M. R. Masani or Humayun Kabir - Krishna Hutheesing's autobiography, "With No Regrets" - a luminous interpretative causerie on life and literature by K. D. Sethna - Harindranath Chattopadhyaya's latest volume of poems - Sr. Aurobindo's revelatory letters on death and after-death, or love of the Divine - an article of Noiini Kanta Gupta's, elucidating felicitous-Ly the Aurobindonian philosophy or some discovery of his own of truth or beauty - a fighting review, by Aniibaran Roy, of high-placed foliy or pretentious learning - a clinching piece of political dialectic by Rajaji - the Gandhi-Jinnah letters - an eloquent or impassioned speech by Ramalinga Reddy or Radhakrishnan . . and we are reminded every time that Indo-Anglian literature is in very truth "alive and kicking,"

#### TOMORROW: The Future Of English

This then roughly is where we stand at the present posture of affairs. Indians no doubt first started writing English as a matter of necessity, but what really matters to us is that they have made a sterling virtue of this necessity. For about a century the Indian intelligentsia has tried to achieve self-expression through this difficult and intractable foreign medium; and it can hardly be denied that the best Indo-Anglian noveis, poems, essays, and dissertations are quite the equal of similar productions of authentic English and American writers. In Professor E. E. Speight's words, the many Indians who have written in English stand "as symbols of a power of adaptation which is so much more astonishing because it comes from a people who in other ways are so conservative."

It is thus needless to be apologetic about the achievements of the Indo-Anglians. In Sri Aurobindo, Mahatma Gandhi and Jawaharlal Nehru we have three among the ten greatest masters of prose writing in English today, while in Sri Aurobindo we have likewise not only the greatest of the Indo-Anglian poets but also one of the supreme poetic glants of qur time. It is therefore nothing less than puerile to

seek to dismiss Indo-Angilan literature as necessarily the work of second-hand or second-rate. Literary craftsmen.

The opinion is sometimes advanced that Indo-Anglian literature, whatever its achievements in the past, has no future,-that, at any rate, in the interests of Indian nationalism, it ought to have no future. It is one thing to say that self-governing India, by withdrawing from English the weightage it at present enjoys in our curriculum, will restore our own languages to a position of power and prestige In the country; but it is a very different thing to say that with the end of British rule, English too will completely drop out of the curriculum in our schools and universities. Even when all deductions have been made and caveats have been entered, few right-minded people will deny that English literature has contributed a good deal to our cultural and political awakening; and our quarrel is with Amery and Churchill, and not with Milton and Burke and the great language that they spoke; and it would therefore be suicidal to throw away in a spurt of false sentiment the advantages of over two centuries of cultural intercourse between England and India. It is essential that English should continue to be a compulsory second language in the secondary school and university stages. We need then anticipate no dangerous rivalry between English and our own languages; on the contrary, they may be expected to flourish as channels of mutual enrichment.

Another interesting view that is held in some quarters is that, while English - even preferably "Basic" English - may be retained as a hand-maiden of commerce or a strictly subordinate instrument of convenience, it need not be studied as a living literature. An elegant variation of this view is that, while it is legitimate for Indo-Anglians to attempt prose of all kinds, poetry is for them "forbidden fruit", and any transgression of this commandment is to be visited with all the "hell-fire" of the self-appointed Pontiff's wrath. Fortunately for letters, nobody cares for these Prelates and Pontiffs; and genius still finds out what it must not do and then promptly does it! Poetic expression in a foreign language is, no doubt, possible only after a prolonged and intimate study of its sound values and verse forms. But if the Indo-Anglians are prepared nevertheless to woo the English muse, fully aware of the manifold difficulties on the way, it is not for these dispeptic Pontiffs to condemn their endeavours purely on 'a priori' grounds. It is, again, wrong to argue (as some persist in doing) that an Indian who writes bad English verse will somehow produce superlatively good poetry in his own mother tongue.

Yet another detractor of the Indo-Anglians is the "purist"; his super-sensitive diaphragm detects the alightest deviation from the supposed norm of "English-English", and he fixes on the miscream his Medusa stare as if he would consign him to a special Circle in Hell. So much of a "purist" is he that he cannot even stand modern English writers like Aldous Huxley\_and Lytion, Strachey and Charles Morgan!

Notwithstanding the "purist" 's splenetic grouns and fulminations, the courageous writer will go his nwn way, his mind will be ever lost in the art of expressing in words the tumultuous emotions that seem unwordable, the art too of capturing in phrases the thoughts born of anguished watching and waiting as also of estatic heaving and receiving...

Let us not then permit the "purists" to slience us into manity or worse. The Report of the Sadler :Commission on the Calcutta University rightly anticipated that the English of the Indian would not mecessarily be indistinguishable from that of the :English-born citizen; but (the Report adds) "it would be by special qualities and characteristics that -It would be distinguished, not by incongruities and faults". : American influence will in the future be at cleast as strong as British Influence; and various other -factors also are-likely to affect the development of Indian English. And that is as it should be. Mere 'howlers' and "Indian English" need not always be synonymous terms; and it is not impossible that the Indo-Anglians of tomorrow will evolve an interesting Indian variation of English, strictly faithful, to the genius of the language and yet distinctive, virile and unashamedly Indian.

We have now done with the detractors. We feel convinced that the career of Indo-Angilan literature is not ended; and that the best is yet to be. It is certain that its century-old history of aspiration and achievement will be exceeded far when the tollers of the night find their true voice and vocation in the clear and wide spaces of Tomorrow's Dawn. Let us then dare the future with courage and faith, and we shall not be long denied our heritage.

#### Limitations And Possibilities

When we talk in terms of the future, it is necessary that, we should have a clear perception of the ilmitations as well as the possibilities, the adverse no less than the promising factors in the situation. English can never be the language of the masses in India; it is, and it can hope to be, only the language of an elite, and even with them a cherished luxury or a personal necessity rather than a sacred law and condition of being; in other words, more a valued and celicious beverage like, say, Ovaltine than a primary food like mother's milk or the water we drink. It is prudent, then, to admit that Indo-Anglian literature in the future will but play a subsidiary, though imquestionably a national, part in realizing the brave new India of our dreams.

We shall increasingly lean on the services of the Indo-Angilans and their literature in the years that loom ahead, partly for purposes of inter-provincial understanding and partly for fulfilling our responsibilities as a member of the comity of nations, as English is spoken today by over two hundred milions scattered all over the globe, the Indo-Angilan swriter opens (in Sir Bomanji Wadia's words) "the doors of cultural contact between his own country and those two hundred millions, and such contact is highly necessary if India is not to remain in Switchighty necessary if India is not to remain in Switchight is coloured to the property of the pro

scholarship.which.knows no geographical bounds in the midstrofca.civilized world." Is not this destiny noble enough for the vainest Indo-Anglian?

On the other hand, we shall be committing a very gross mistake indeed If we supposed that the Indo-Angilans of the future will best play their part in building the Indian nation by concentrating on informative, serious and propagandist studies rather than on creative literature. Without the sustenance of creative literature—poetry and drama and fiction and what not—mere objective studies and specialist treatises will ere long become the incarnations of insiplidity and inutility. If, we plan at all, we should project the vision of a multi-chambered Indo-Angilan literature, with poetry for its significant glittering planacle rather than a literature on the model of a suffocating commercial godown.

Lacking compulsion as hitherto and freed at last from the stigma of association with the "rulling" race. English will in the future be taught and studied by people who have a genuine taste for it and are attracted by its rich and varied literature. And Indo-Anglian literature will also take root, grow and flourish on the hospitable Indian soil as a thing desirable in tiself, and not as a thing artificially or tyrannically imposed from above. Tomorrow as well as today, many indians will make a virtue of bilingualism; and, in the fullness of time, they will teal almost equally at home in their mother tongues, in English, and also perhaps in some virile all-India language fashloned by the Time Spirit.

### THE ORGANIZATIONAL SIDE OF LITERARY PLANNING

Encouraged by these reasonable prospects opening out before them, the Indo-Anglians of today will do well to ask themselves how best they can rise to the heights of realization beckoning from above. On the material and organizational sides, it must be admitted that, though something has been certainly achieved, much still remains to be done. Most of our publishing houses are yet only fumbling with the instrument or experimenting with it, at best groping in half-lights or false-lights, and at worst misusing or wholly perverting it. We cannot honestly say that our publishers, taken as a body, have on a long-range view intelligently exploited the conditions created by the war. Books are published without discrimination. and the trivial and the shoddy more often than not elbow out the solid and the authentic. A healthy publishing business will be a national asset of incalculable potency, and one ardently hopes that "fifteen years" hence we shall have in India such a business, at once indigenous and far-sighted, prosperous and progressive.

The distribution of books too is now wayward and wasteful. Many of our author-publishers and regular publishers seem to be content to publish books somehow,—and hope for the best. Our booksellers,—excepting the honourable few who even now partially redeem the time, are both unenterprising and unreliable. They refuse to play the game with the public and publisher alike. A young

American publisher recently told the present writer:
"A, book sells if It is seen." It is true; and it is a
thousand pitles that many a good book in India is
born to blush unseen, unbought, and unread. In the
years ahead, the publishing business should learn to
work in collaboration with the book-sellers, organized
scientifically, on the issue of the nation's cultural
progress. And, above all, book-reviewing should be
done promptly, helpfully and impartially. Today the
review columns of most of our papers make a pittint
show, and many of our reviewers are amateurish, incompetent and perverse. It is to be hoped that our
reviewers will learn to do their job, neither in a
cavalier nor in a murderous spirit, but in a spirit of
understanding, freedom and good-will.

Let us not, however, commit the mistake of confusing the material and organizational aspect of planning with the more fundamental, quintessential, spiritual aspect. Between the creative artist at one end and the reading public at the other, many middlemen necessarily supervene,-the printer, the binder, the publisher, the book-seller, the travelling agent, the reviewer, the broadcaster, the organizer of the circulating library; and we shall not ignore their respective functions or their relative importance. But a more major Item - In fact the crucial item - in planning is to exhort the creative artist to follow implicity his Vision, and, also, to exhort the public, and especially the intelligentsia to create conditions favourable for untrammelied creative activity in their midst. If the public is anothetic or highling, the bud of creative activity will refuse to blossom, but wither instead and come to nothing; the soul of the great artist will retreat into a Bramah casket of his own anguished forging, the world will thus lose its Vision as well as its Voice, and life will grow savouriess at last. May it never be said of the Indian Inteiligentsia that it chilled its poets into silence and . drove its Knight-errants of the Spirit to a premature gravet

#### THE CREATIVE SIDE OF LITERARY PLANNING

We come at last to the creative writer himself. It is for him to bear singly, or almost singly, the burden of our future destiny. We have no right to advise him or to teach him or to dictate to him. If the Indo-Anglians of today and tomorrow prove faithful to the creative urge stirring within them, if they gaze unblenched at the Sun of Poetic Truth and catch, however faithfully, its life-giving beams, -if, in short, they do not barter away their creative freedom for a pot of propaganda, thea surely Indo-Angilan literature has an immense future. Detailed suggestions are puerlie and out of place. In the future, as in the past, Indo-Anglian literature is going to be produced by "sundry individuais;" even so, it cannot be denied that literature, partly at least, owes its-origin to the complex of coaditions in the society, reflecting in a very general way the feelings, aspirations, hopes, fears, frustrations and ecstasles of a whole people. We expect the great Indo-Anglian writers of tomorrow, be they poets or dramatists.or novelists, or even essayists or biographers or autobiographers, to make literature at oace personal and

universal, at once a thing of trembling serisibility, reflecting a soul's infinite explorations in the universe, and at the same time also somewhat of a 'testament of a whole generation.'

Especially at a time like the present when attempts are being made to destroy the foundations of Indian nationality, it is the Indo-Anglian, even more than the Bengall or the Tamil or the Hindi writer, who can play a noble part in projecting before the sons and daughters of our country; a vision of the unity of India, a unity that purposively integrates, not destroys. Its manifold variety. We are one in the chequered history we have left behind us; we are one as we drain the cup of frustration today; no tess are we one when we plan the building of tomorrow's world. The history of the recent and remote past is rich with alluring themes for the creative Indo-Anglian writer: and - who knows?we shall have, fifteen years hence, many national testaments like Tolstoy's "War and Peace" or (to cite a more recent instance) Lin Yutang's "A Leaf in the Storm."

The Indo-Anglian writer of tomorrow may give us good noveis, entertaining essays light as the wind, breezy blographical monographs, and revealing autobiographies; it is nevertheless the poet who will make or mar the future of Indo-Anglian literature. If the poets fall us, nobody else can save us, for long; and in this respect we have no reason whatever to despair, The Indo-Anglian poets of today are an agitated and active group of young men and women who do not hesitate to dare the future; many of them have self-knowledge, and all have self-confidence; be their theme the bivouac of battle or the glory of moon-ilt gardens, equally are they authentic and articulate. Our hopes are more particularly centred In the work of the mystic poets, the brave Laureates of the Spirit; for they only can unfreeze the imaginations of men so that they may mingle once again and participate in the spiendours of the Spirit. Rising to the sheer infinitudes of the Spirit, the great Indo-Anglian poet of the future will see and comprchend all, his fiaming vision will consume with its terrible love all terrestrial dichotomies and contradictions, his ecstasy of apprehension will see the One in the All and the All in the One, and he will render Reality in forms and rhythms that assume the character of the primordial 'mantra' - the rune or incantation that is half a whisper from Above and balf a prayer from Below - more the law and impulse in four dimensional Space-time than a collocation of human sounds and images.

In one of his articles on "The Future Poetry." Sri Aurohindo declared: "To embellish-life with beauty is only the most outward function of art and poetry: to make life more intimately beautiful and noble and great and full of meaning, is its higher office; but its highest comes when the poet. becomes the seer and reveals to man his eternal self and the godheads of its manifestation." Appearances, the pressure of phenomena, the manifoldness of life, these distract us and jerk us out of our equanimity; we, seek certifudes, we seek permanent frames of

and we are rebellious, frantic, wilfully perverse placed this great ideal before the Indo-Anglians but because we cannot find them! It is the privilege of has also shown, in divine-human pieces like "Thought great poetry to shatter the lid and tear the vell and 'the Paraclete" and Rose of God", how precisely the reveal the splendorous reality behind the madden-"poet becomes the seer and reveals to man his eternal ing appearances. Since at its best poetry thus ever self and the godheads of its manifestation." It is seeks to switch on the light of the Spirit on the grim - for others now to follow Sri Aurobindo's guiding crudities of appearance, poetry's quintessential func- vision and example, to redeem the promises of the tion is spiritual, whatever its apparent or immediate day and fulfil our giorious destiny. .

reference, we seek the undying and the unchanging- subject may be. And Sri Aurobindo has not only

## THE MARCH OF INDIAN MUSIC

DILIP K. ROY

Dily Aumar Loy whose fame has long overfound the boundaries of his native Bengul, graduate) from the Catcutta University with first class honours in mathematics and spont one time at Cambridge for higher studies. He towerd all over Turnep andigmy Western music and, whenever possible, lecturing on Indian music. On returning home, he undertook a musical pilgrimage across India defore youing for Auroindro Arram of logo in Pondichery. He has published several volumes of poems in Bengali which are of great value and his movels as well as his books on musical matters in the same longue have been outstanding. His most recent work is "Among the Great", a most thought-prooking series of interviews in English with Ree illustrous mea of our age-Romain Rolland, Mahatana Gandhi, Bertraud Russell, Rabandranth Tagore and Sri Aurobinda A book of Figitish poems by this 111 soon to out under the litt. "Eyes of Light."

Mr Roys anticle is a treatment at once poette and practical of the importance, significance and tendency of Indian mines. It indicates the high place Indian Culture gives to the missical art, regarding it as a bringing to earth of a superhuman word of harmony. The true trend of our mines is distinguished from the false which is now rompant in most of our talkies. The author discusses with great insight the character of the three man claircal time patterns and touches very suggestively on the companionship of time and song, were and poetry especially in the devotional and mystical sphere of metodic self expression. Finally the suprime place mysticism should have in Indian mines is indicated with both force and feeting—and some illuminating hints are given about the first distinct of the missions of the despess inspiration.

Some minds there are to Art and Beauty dead, Mune and poetry an whose ault ear Pall barren Horns grace not their bruish head, Tals, toa they lack, set is their beasthood clear Than Ha en widauid not upon grass their featis, Good for une it this for the other beats?

TILL one does, sometimes, meet very worthy soils among those who, convinced of the worth-lessness of 'Art and Beauty,' contend emphatically that no apotheosis of the fine arts can ever raise a musican or a poet to the high status of a scientist in glory or a statesman in tide of power Are not the artists, at best, brief butterflies of fiame and flutter which flach and quiver for a moment. In a word, Art is not an important help to serious hving—it is a mere transient rainbow meant for the light-hearted

But even when one is impressed with the utter sobriety of the serious-minded one can, with equal conviction, hold with the ancient sages, whose sayings were not less "important", that

there have a samsare karrera Projapatih
(The poet is a wost reason in
The world of Peetry its for man to min)
Add to it the approval of an eminent Sanskrit aestheldan?

The usedom of the artists was ard cansesousness

Can father things, anglungsted before, of flauless grace. Which retrain has been caught up even by the "important" people since the dawn of Time after the clouds and mlasmas of life, even they have actied for the salving radiance of a consciousness other than that of statesmen in tide of power or scientists in glory For it has been the verdict of dateless experierce that the human spirit cannot march on undistanged in face of hordes of Death all around, without the light and prop of an inner peace, a psychic joy which no science or statesmanship can breed in the life-soil of the shirt!

#### THE MEANING AND APPEAL OF MUSIC

Music and its matchiess mate, poetry, have been to us Indians, even more than 'important' since the surrise of our civilization. It is not without significance that our most ancient Raga-meiodies — which we rightly call our 'classical music'— are fathered not on 'human' composers but on one of our most ancient Gods of the Trinity, Lord Shiva

European critics like Mr Beverley Nichols love to laugh at this how fondly the Indians turn to legends as synomeous with recorded annals of their past life and culture! Such critics can hardly understand either the deep inspiration behind our Ragamusic or the psychology which created the legends Fortunately, all visitors to India are not of the mentality of Mr Nichols, eager to pour chear ridicule

Translated from the San-crit qua ram of Bhartirham by Sri Aurobinodo;
 Collected Poems Vol II

The famous ancient Alankarik Abhinaha Gupta

upon Indian music, arts, mythology — in short everything that has contributed so richly to human civillisation. Men of real culture and understanding, like Mr. Fox Strangways, too, occasionally visit our peninsula and astonish us with their insight of reverence. This ardent truth-seeker wrote in his famous book. "Music of Hindustan:" "The Indian does not make or read histories and does not appreciate the value of chronological record. It is the custom to smile at this, but it would be well to understand his point of view first. A whole people is generally not mistaken about its real needs." And the reason is, as the foreign connoisseur has rightly divined, that the Indian's "knowledge is of revelation more than selence"

So the present writer proposes to dwell here more on the "revelatory" aspect of our great music as distinguished from the "historic". As for the scientists of music there is even less to offer to them since the world of symbols and legends and "flawless grace" are beyond their purview. We, too, can smile at their learned smiles and acquiesce with a well-known Encilsh poet:

You can usek it out by factions or by simple Rule of there;
But the way of Tweededoms is not the way of Tweededoe.
But to step into what is really important in
music: its lasting appeal and legacies to the soul in
its nauseless march of changing moods.

Although a "chronological record" of the evolution of different classes of our music does not exist, its varied legacies have come down to us undeformed, because here the reverent spirit of Indian art-lovers was far from indifferent. So our classical music has been sedulously cultivated as well as preserved by long lines of conservative musicians who have fealously guarded their treasure as loving heirs guard their scarce heir-looms.

### THE THREE CHANNELS OF INDIAN CLASSICAL MUSIC

This wast cascade of our Classical music has loved mainly along three rich channels, about which something must be said, however briefly. For, without a grasp of the rudiments of our musical lore its later crystallisations would be difficult of comprehension.

## First of our three great types is undoubtedly — Dhrupad.

For it is primarily in this rich and majestie body that our oldest musical inspiration was incarnated, when we first learned to conceive of building music as an architect would build an edifice. For Dhrupad succeeded in presenting to us a stately architecture rightly revered by all true lovers of music for its incredible power of withstanding the ruthless downpull of Time. This most ancient and elaborate music of the Aryans was erected on four noble pillars or "movements" (technically called "Tuks") of 'Asthayi, 'Antara, 'Sanchari' and 'Abhoga.' There were a host of architects who in different ages fashioned different compositions in the Dhrupad style, among whom the outstanding figure was, undoubtedly, that of Tansen,

the court-musician of Emperor Akbar. He added height as well as girth also to our Dhrupad and created new Ragas often through a process of amalgamation, as for example in Ragas like Miyanki Tori. Mlyan Mailar and Darbari. But his achievement did not end there: he created a new style altogether which his successors, like the great Wazir Khan of Rampur or Zagaruddin Khan of Udaipur developed. along with their gifted disciples. It is not possible to pass in brief review over the endless litts of Dhrupad in the limits of a short article. I will only say that Dhrupad was always far from dying even when it was reborn not only in songs but in new styles as well. lavish with light and spiendoured with space where there was no quarter for little things. All is generous under its noble vaults where the Soul was constantly amazed with echoes as rich as they were endless. Such at least were the Dhrupad compositions of a noble galaxy of singers like Baiju Baora, Gopal Navak, Nawalkishore and others till one of the deepest echoes was housed in

#### Kheyal.

Kheyal was developed by the marvellous genius of men like Amir Khasru, Sadarang, Adharang and others, some their collaborators, others their disciples. Although, as we have noted already, no reliable history of our music exists,\* it can be safely presumed that, in the main, Kheyal was introduced and developed by the Mussalman genius just as Dhrupad was created and enriched by the Hindu (For even Tansen had been a Hindu by birth and culture.)

Kheyal was a direct derivate of Dhrupad. It lacked the composite structure of Dhrupad, had only two movements where its progenitor boasted four. It brought in, however, a rich compensation: freedom from the limitations which Dhrupad had so austerely imposed. Thus technique satisfied a long-standing thirst among music-lovers - the thirst for creative improvisations. These, however, had to be assimilated with caution since the structure of the Raga was still regarded as essentially sacrosanct. But the Kheyal singer luxuriated in the display of his creative 'elan' in 'tans' which the Germans eall Koloratur, + Not that Dhrupad allowed no freedom at all to creative virtuosos: there were rhythmic improvisations in its later development called 'bants' ('dun', 'chaudun' etc.) but music-lovers were completely subjugated by 'tans' which came to stay and continued to evolve as the Kheyal genlus explored new possibilities of their 'tan' combinations. There are many other traits in Kheyal not a whit less valuable, but it must suffice here to mention only its chief distinctive feature - namely, the novel scope it allowed to singers to create almost endiessly even within the cadres of the Ragas. The

This I have shown in my book on Indian music called SANGTIKI
published by the Calculta University; it is a survey of the different styles
of our music at the end of which I have tried to show its future trends of
evolution.

<sup>†</sup> There is an Ruglish equivalent for this word-colorature. But it is scarcely used in England. I used, however, to hear often the German word in Berlin and Vitana.

older traditionalists did not savour this expressive freedom and called the newcomer a parvenu, as the name 'Kheyal' meaning caprice suggests. Kheyal, however, was really no parvenu, but a legitimate child of its great father in that it never scoffed at tradition. On the contrary, great Kheyal singers had first to master Dhrupad - aiways. Those who in their lust for the Ever-new ('Punarnava') in art cut adrift from ali tradition in culture end headlong in a pathetic shipwreck of the noblest values which are the heart-throbs of all culture. An instance in point is our talkie music. No true lover of Indian music can call this insuit to music anything but a standing shame to our dignity. A living art must show its nexus of love and reverence that binds it to the past. It can repudiate its lineage only at its own peril: at the cost of values that make life worth while. Kheval singers were real living creators and as such did not even dream of disfiguring the Dhrupad Ragas: they only infused new blood into its ageing velns.

But they wanted also to bring in even carefree moods, (For Kheyal was still tethered to Dhrupad), The result was —

#### Thumri §

This was, in a sense, the most startling of all our musical discoveries in the realm of the Classical music. For Thumri even questioned the Classical premiss of the inviolability of the Raga-modes and, like the nomad fairy that she was by temperament, eluded as it were the arena of the Raga and danced all over the place with her moods of spontaneous joy shedding reckless beauty at every step. And she sang to her forefathers with a delicate charm all her own:

I bow to ye, O ancients proud, Who are possed on mountains no Time mars; But I am still a virgin vowed To truant gleams that brook no bars. I love your summits high and hoary, The tranquil trances of the blue. I love your summits high and hoary, But the lighter nature still I woo. The magic bee that haunts the blooms Confessing to her million loves. The wanton blades of green on tombs, Pale firefly clints in shadowy eroves. The lips and laughter of the child, The faintest echoes of bird-sones. On shifting sands my homes I build, For fleeting sweethearts my soul longs.

I have espoused the cause of Thurari with some warmth not because I believe she is greater than her ancestors—she is not — but because our Classical moralists of music unwarrantedly castigated Thurari as wanton law-breaker with no light of the ideal in her eyes. The charge that she broke the laws of Dhrupad and Kheyal singing was true, but would she not have forfeited her very 'raison d'être' it she did

not? And then it is not true either that she lacked deals. On the contrary, she had too many, among which not the least was her sleepless yearning to transmute our Classical gaits into the modern—impelled by youthful vitality.

But there was a deeper ideal that beckoned to her, an ideal old as the hills and yet young as the springtide: I mean the emphasis that both the heart and mind lay on the image-evoking power of "song" as distinguished from the music in which it is woren. This ideal is indeed "old as the hills" and yet it is ever-new in that the song is one of the most changeful media of human emotions. I will try to explain briefly what my drift is, though I am afraid it is too vast a subject to be dealt with in an effective manner without ample illustrations.

#### SONG WEDDED TO TUNE

The Ghazal and the Song

Simultaneously with the efflorescence of Thumrl the old impulse to the song was stimulated anew as Thumri singers were mostly 'bayaderes', and women singers could hardly do without word-portraiture So they sang Ghazals also, for the same reason, though the inspiration behind these was different. Stll Thumri had a natural affinity for Ghazal in that the theme of either was love and dream of love, So, both taught the Classical music-lover to hark back to the theme of love, and the old habit in its turn gradually re-created the old hunger for words. This hunger has all but died among lovers of the Classical music who maintained that words were aliens in the homeland of music. The new spirit behind the song's renaissance declined to undersign this verdict of one-sided expertism and as soon as this was felt, the poet, with alacrity, recaptured his passport and returned once more to his long-lost land of love - the land where verses and tunes woo each other. Why on earth must we bow to a land of usurpers who always go too far, Puritan philistines temperamentally incapable of understanding the beauty of free love and harmony? "The song, the song," proclaimed the poet once more, "the song is the ultimate home and country of music, not vocal gymnastic and rhythmic rope-dances. Poetry and music must be drawn to each other by a natural magnetism derived from a natural kinship. Whom God has united who shall dare to part?"

This kinship, however, it must be remembered, had been successfully repudiated only outside Bengal. In Bengal, the repudiation itself had been, from the start, contemptuously repudiated. "Words, allens in the land of music!" laughed the Poet-soul of Bengal, "Insanity! How else on earth could you sing through 'Kirtans' the magic 'illa' of love of Radha and Krishna? And what Raga-music can come anywhere near this divine pictorial music?"

Not that Bengal had not the imagination to understand the essential message of the Classical inspiration, whose characteristic greatness she had appraised correctly enough and had always encouraged the cultivation of Raga-music; but still it would be untrue to say, echoing a handful of

<sup>§</sup> I have omitted Tappa the successor of Kheyal, because, though this too was a creation of value, it lacked scope and so could not evolve further. For more detailed description see SANGTIKI. Chapter 10.

Classicst dilettantes, that the musical heart of Bengal could ever be given to music minus words. That would be, for Bengal, 'para-dharma' - going against her own nature. So, after the evolution of later Kheyals and Thumris, she felt only a deepening urge to develop her songs along new lines suggested by such music - to exploit these fully, but decilning to be exploited. The result was KAVYA-SANGIT which means, literally, poetical songs. Essentially, it was a joint dance where the modern poetry and music of Bengai achieved a new harmony as, for exampie, in the songs of great composers like Dwijendralal and Atuprasad in the first three decades of the present century. I cannot deal, in the brief span of an article, with the distinctive features of such composers and others who, though of lesser eminence, evoived fine styles attaining new as well as high ievels in the art of song-composition. Only one great achievement must be mentioned if only to show that the creative soul of the Indian Artist could not rest on its laurels. This was a new flowering of vitality born of the life-throb of the Western music. The purists of course protested, as was only to be expected, but the true music-lovers of Beagal could well afford to ignore their opposition. (For it was in essence but a new expression of the eternal feud between the old and new, Dld not Albrechtsberger, the master of Becthoven, warn his pupils against the contagion of the great German composer when the latter created his new music defying the established rules of composition?) And what was more inspiring still was that the same creative urge that impelied these great composers of the last few decades goaded their successors to move on further. The time has not yet come to speak of these and their ideals. Only this much need here be said that the new experimenters draw their inspiration from a real daemon and that there can be no question that it is a forward march in the right direction and not a decadence.

I say this prompted by a deeper motive: it is to suggest that one of the chief giories of the future of Indian music is going to be this progressive evolution of the song proper, ever fashloning richer worlds of harmony out of the ideal wedlock of poetry and music. And this spirit of renaissance has stirred in the heart of the whole of modern India (of which Bengal is a part) because the creative fire is still burning there. The past music, great though it was, was not great enough in the sphere of song. The ancient tradition had to be exceeded and overpassed that new traditions might be handed on to posterity. "The traditions of the past", wrote Sri Aurobindo in a letter to the present writer, "are very great in their own place-in the past. But I do not see why we should merely repeat them. In the spiritual development of consciousness upon earth a great past ought to be followed by a greater future." The traditionalists are always scared when they are confronted with such heresies. To them the word "past" has a speil that in the end acts more as a shackle than as a spur. But the heart-beats of marching life must echo the song of the soul: "We do not belong to the past dawns but to the noons of the future."\*

Which is not to deny the unique giory of the "past dawns." No real light that is not a phantom's glint can suffer an entire eclipse. There is no outflash of light, however short-lived, but leaves a lasting trail. And our Classical music was indeed a heritage of light—not a phantom legacy, as all lovers of light must agree. In the reaim of "melody" it is unquestionably "one without a second." This is no mere fond illusion, I can quote the verdicts of great authorities on music like Romain Rolland, Leopold Stokowski and others who wrote letters of deep admiration of our unique heritage.f Our Classical musicians were essentially creaters of a world of subtle sound which was really a projection of a subtle suprahysical world to which our Yogis have given the name of 'Gandharva-ioka.' It is not a poetic fancy. No one who, while singing our melodies, has not felt vividiy the descent of a higher power of sound can have touched the heart of the mystery that is our Raga-melody.

#### Mystic Song

This descent is felt even more vividly and continuously when the singer's spirit has learned to soar beyond the 'Gandharva-loka' so that the Divine inspiration is conveyed more directly, specially when the singer, singing ecstatically, feels the Presence of the Supreme Beloved. Here we come at last to the realm of mystic music where the song ceases to be an art and becomes a 'Sadhana', an offering of the heart in adoration. For it goes without saying that no song that has not outsoated its art can command this inspiration.

By this it is not implied that, to the Divine, art as such is something wholly unacceptable. An artist, when he creates "things of beauty", is as dependent on the Divine inspiration as is the mystic. Does not the Upanishad say: "Yadihasti tadamutra yannehasti na tat kwachit?" (Whatever exists here exists there, what is not here is to be found nowhere.). Or to put it in the language of the great mystic of to-day: "There is something that wills the manifestation and supports it .. and whatever is willed in the world has been uitimately wlited by the Brahman"t Which must be still more applicable to the arts because of their purer media of self-expression: the Divine will is more easily spelt in the alphabet of beauty.

"But still there is a beyond", § to put It in the ianguage of the mystic once again. For, when all is said, it can still be said that everything that is manifested does not enjoy the same status or power ('bibthuti') of the Brahman. "Ail things that shine shine indeed through His Light"Sbut not with the same intensity or purity of justre. The vehicle ('adhar') is a determinant of the density as well as the momentum of the descent. In the world of the Classical music, the Ragas, when sung with real inspiration, are indeed transfigured and must reflect some power of sound that is supra-terrestrial. But unless and until they are offered to the Divine in an

<sup>.</sup> ESSAYS ON THE GITA ..... Vol.I.....SRI AUROBINDO.

<sup>†</sup> In chapter I of my-look "AMONG THE GREAT" is recorded the high praise of Rolland. There are hundreds of others in Harope also who share admiration of our at of improvisation. The great planist Padrewky told Tagore (Thead it directly from the latter) that Indian meddles were certainly not less institute and evolved than Baropean symphonics.

The CHAPTER III. Chapter IV.....SRI AUROBINDO.

ecstasy of adoration they cannot manifest what may be called the godilest power of sound. It is out of this ecstasy that true mystics of India have always composed and sung their songs, exhibiting these not as 'oeuvres d'art' but as offerings of the devotee to the Beloved. To adore the Divine through songs was in fact the way of daily worship among the supreme Kirtan-singers of Bengal and the mediaeval mystic saints of North India. Their devotional songs, the famous 'bhajans', are still sung by thousands of devotees to tens of thousands of seekers who turn to 'bhajans' as initiates would turn to mantras. By the word 'bhajans' I do not mean the songs sung on the piatforms of musical conferences by popular singers or 'bayaderes' to the thundering applause of a gay audience who consent to appreciate the "art" or "science" of our high music. I shall never forget just such a 'bhajan' sung in a fashionable gathering in Calcutta by a famous songstress. The theme was the heart-rending appeal of Draupadi to Krishna, when the former was about to be disrobed in public by the notorious Dushasan of the 'Mahabharata'. The famous songstress announced she was going to sing a 'bhajan' and sang this song on with a gay face, bowing every other minute to the deafening claps of an audience who admired her lightning 'tans'. A true lover of 'bhajans' might have felt sad for the audience and even for the songstress, but certainly not for Draupadi, For he would know that it rang all faise, because to sing such a theme as 'bhajan', the singer must master not the art of lightning 'tans', but that of letting his devotion transform him into a Draupadi-for the time-being, anyway. And to be able to sing such 'bhajans' one must, besides, learn the art of growing oblivious to the audience. In other words, one must die as an artist to be reborn as a Yogi, Hereanent Sri Aurobindo wrote once to the present writer: "Every artist (there are rare exceptions) has got something of the public man in him, in his vital physical parts, which makes him crave for the stimulus of an audience, social applause, satisfied vanity or fame. That must go absolutely if he wants to be a Yogi and his art as a service not of man or of his own ego but of the Divine."

#### THE ULTIMATE IDEAL OF MUSIC

It is not contended that the dismissal of the ego becomes any easier when the egotist is an artist. In point of fact, for an artist it often becomes more difficult - specially in our modern world where art 'qua' art is so persistently regaled with palatable flatteries. That is the reason why the Oid Adam in the artist makes him so often look somewhat ridiculous like a vain peacock strutting about. Besides, to be centred in the divine in utter obivion of self is only possible when one has become an advanced initiate in Yoga; in other words, when the heart is upturned like a sunflower towards the Sun of Love. The ideal of drawing inspiration not from man but from God was and must always remain the ultimate ideal of a singer. Not that his art cannot be enjoyed by man: it was, and, always, can be partaken of by others but only as a 'prasad' \* But for this to be possible the art

of the singer must be disengaged from its current conception of obligation to society as a charming entertainer and yoked to the service of the One whose acceptance alone can transmute an art into Yoga, This, it must be remembered, is no Utopean ideal but has been always accepted in India as the highest ideal of spiritual music. Lovers of our mystic music still cherish the famous parable of the Yogi singer Haridas Swami and Emperor Akbar, The former, the Guru of Tansen, declined the Emperor's invitation as, he said, he sang his songs only to his Lord, Shiva. The Emperor impelied by curiosity went to the Yogi's hut and heard him as he sang in divine ecstasy. It was a revelation to the King of what music could be but he did not quite understand how the music had been so completely transfigured. So he reprimanded his court-singer. "Tansen", he said, "you assured me that your Guru had taught you all his art. But he hasn't. For although he sang the same songs that I have heard you sing, yet they were not the same not by a long way." "What you say is undoubtedly true, my Lord," sad the disciple, "but the reason is not the one you have suggested, but this that whereas I sing before the Emperor of India, he sings before the Emperor of the Universe."

Any one who has ever heard an authentic mystic since knows how true this is to spiritual experience. And the reason is indeed what Tansen gave to Akbar: the wings of the highest inspiration cannot be given by a mortal audience; they can come only from the Immortal Listener.

If the present writer has stressed this it is only because our ancient ideal of transmuting music (or for that matter any human activity) to its highest status and potency through an act of direct offering to the Divine has grown somewhat dim and mythical in modern times. But it is bound to emerge again with the renaissance of a spiritualised society. That, in the realm of sound, music created as an art-product for human entertainment cannot come anywhere near the music genuinely offered to the Divine is doubtless not easily demonstrable (for the reason that great mystic singers cannot come to us, it is we who must go to them ). But any one who has had the suppreme good fortune of having heard such inspired masters cannot have failed to realise that a song that has become a 'prasad' through the aichemy of divine acceptance is an everlasting aliment to the soul in its everlasting Quest, whereas songs that are fabricated for social ends can at best be caterers of brief interludes. Such interludes, through art and craftsmanship, may indeed teach us that glooms are not the last evidence of life, but to have the experience of the 'steadfast Sun' beyond life's clouds and shadows the soul must teach itself the supreme art of transcending Art.+

Literally, fruit, milk etc., offered to the fliving and thus made holy and afterwards eaten by devotees with joy and gratitude.

<sup>†</sup> The vivid act of dramatic music delineating the eatire gamut of music motion has not been dealt with 10 the precent active. The reason is that, with the evolution of the theater, this sat and simplificant and the control of the theoretic that and simply of the control of the theoretic that and simply of the control

## SPIRITUAL INDIA AND SRI AUROBINDO

#### ANILBARAN ROY

Anilbaran Roy, M.A. in Philosophy and English (Calcutta University), B.L. (Calcutta University), 5 one-time Professor of Logic (Helampur Roman Catholic College), and of Philosophy (Wesleyan College, Bankura), joined the Nationalist Movement (1921) and became Member of the All-India congress Committee (1921-21), editing during that time the Bengali Weekly 'Sarathi'. He was interned as State Prisoner from 1921-26. Soon after, he entered Sri Aurobindo's Asram of Yoga in Pondicherry. He has translated into Bengali several works of Sri Aurobindo's; in English he has veritten 'The Illustan of the Charka' 'India's Mission in the World', 'Mother India', 'Sri Aurobindo: Some Views on the International Problem', 'The Message of the Gila', 'Songs from the Soul', 'Sri Aurobindo and the New Age'.

A clear and cogent statement of the essentially spiritual genius of India, Antibaran Roy's article points out how the failure of all ordinary means and the trend of all "isme" and of modern sevence itself stress the need of laying a spiritual foundation of human society. It eliscusses what spirituality signifies, distinguishing it from mere morality and religion and explanning it to be what India calls Yoga. The yogic process is compared to Nature's own evolutionary planning and the most dynamic and comprehensive Foga is shown to be the one developed by Sri Aurobindo: in the practice of this Yoga and not in Marxism, Khadism, Medievalism or Rationalism is seen the true future of our country and the world. Anilbaran Roy makes a wide sweep and touches with penetration and vigour on a great many topics to drive home his vision-India's spiritual destiny and the central place in it of Sri Aurobindo.

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#### THE SPIRITUAL IDEAL

HEN in 1922 an appeal was made to Sri Aurobindo to come out of his retirement and take up the leadership of India, he thus replied in a letter to the late Deshbandhu Chittaranjan Das: "I think you know my present idea and the attitude towards life and work to which it has brought me I have become confirmed in a perception which I had always, less clearly and dynamically then, but which has now become more and more evident to me, that the true basis of work and life is the spiritual, that is to say, a new consciousness to be developed only by Yoga. I see more and more manifestly that man can never get out of the futile circle the race is always treading until he has raised himself on to the new foundation. I believe also that it is the mission of India to make this great victory for the world. But what precisely was the nature of the dynamic power of this great consciousness, what was the condition of its effective truth? How could it be brought down, mobilised, organised, turned upon life? How could our present instruments, intellect mind, life, body be made true and perfect channels for this great transformation? This was the problem I have been trying to work out in my own experience

and I have now a sure basis, a wide knowledge and some mastery of the secret. Not yet its fullness and complete imperative presence, - therefore I have still to remain in retirement. For I am determined not to work in the external field till I have the sure and complete possession of this new power of action not to build except on a perfect foundation."

That letter was written in November, 1922; since then by his unique Yogic sadhana he has acquired an increasing mastery of that " new power of action" and has initiated some preparatory steps of his lifework. But though a great spiritual and cultural centre has already been created in his Asram at Pondicherry and other smaller centres have begun to grow up in different parts of the country in connection with him, there are as yet not many people who understand the full import and potentialities of his spiritual work - a work which is to embrace all life and means the spiritualisation of all activities, none being excluded. Sri Aurobindo believes that a free India returned to her great spiritual ideal but on new and larger lines is destined to be the means of uplifting the world and initiating a new age of the general evolution and it is towards this ideal that all his work is directed. But what is this spiritual ideal? What is this spiritual force which Sri

Aurobindo believes to be the one thing necessary the one thing that must be at the basis of India's freedom and greatness? In modern India Mahatma Gandhi has held up the ideal of a soul-force which, according to him, must be behind all true action, and it is this which people generally take as spirituaiity. But this force which Gandhili envisages is not really spiritual, it is rather a mental will-force based on some sort of moral discipline. Sri Aurobindo, however, means by spirituality a new consciousness which is higher than the mental and the moral and which can be developed by nothing except Yoga. Mental and morai discipline, when properly guided, can serve as a preliminary means for preparing the nature for the higher spiritual consciousness, but it does not by itself constitute spirituality, and the same thing can be said of religion in its ordinary aspects which also beiong to the mind and are not true spirituality. The difficulty which people find in understanding the true nature of spirituality rises from the education now current in India which mostly produces the Western mentality in Indian brains. The Western mentality has been moulded by physical science which has mechanised the human intellect; it cannot look into the inner essence of things but only regards the phenomena, the outward behaviour. Thus, it attempts to bring about a new world order through mechanical means, through social and political adjustments. Such a mentality either rejects spirituality altogether or, if it at ail accepts it, turns for it to morality and religion, the former consisting of certain outer rules of conduct, the latter of outward rites and ceremonies But true spirituality is not a thing of rules and principles, it is a life spontaneously outflowing from the inmost Spirit.

#### SCIENCE AND SPIRITUALITY

It is high time Indians got rid of the tyranny of the mechanised intellect. It is high time also they got rid of the incubus of a blind materialism. Even science now is showing definite signs of emerging from the materialistic phase because it has a new background which suggests a spiritual view of the world, at least is not inimical to it, and also because materialism has led the world into catastrophic social and political upheavals. In his book, "The Structure of Morale," J .T. MacCurdy observes: "At the moment we are beginning to emerge painfully from an age of materialistic philosophy that has been invaluable as the inspiration for applied science, but has led to the neglect of other values, a neglect that is perhaps the ultimate cause of the present war." This sentence is written by a scientist - not by an Archbishop. But people in India, specially our intellectuals, are still under the spell of Western materialism and are imitating Western ideas and ideas without any regard to the genius of their own country. Thus, they echo the positivist argument against religion and spirituality: "The need to worship probably derives from our relations with our parents in our second and third years. Its elimination, if that were found necessary, would probably not be beyond the power of pedagogy." (P. S. in "The Hindu"). Note the use of the word "probably" in two short consecutive sentences. These intellectuals seem to be spineless, they cannot hold to

anything firmly nor can they vigorously reject even. what they consider a faisehood. As regards eliminating religion and spirituality from the life of man. that is what the Russian communists have been doing with the utmost thoroughness and with the heip of all up-to-date devices. And what has been the result? The fight has now been given up as hopeless. Should we monkeyishly repeat the experiment in India? Why not try the other way more suitableto our national genius and tradition and find out thereal basis of this unconquerable spiritual urge of mankind? You must understand man, his nature with its roots, before you can hope to solve the problems of human life, and if Yoga goes to the very foundation of human nature, all our work and life must be based on it.

Criticising the view that the changed outlook of science has become favourable to a spiritual interpretation of life, a reviewer in "The Hindu" observes. "Science is an influence hostile to religion not because it supports any metaphysical position but becauseit is empirical, and must, therefore tend to weaken belief in any system of ideas which lacks empirical foundation." But if the argument be valid that science is bound to weaken belief in religion, how is it that such a large percentage of the foremost scientists in all ages and in all countries have been ardent believers in religion? And as regards the emprical ofundation of science, it is now admitted that science can never give us uitimate truths about things as long as it confines itself to data given by senseexperience. That is the real change in the outlook of science which has been brought about by two great discoveries (the theory of Relativity and the theory of Quanta) in the beginning of the present century, and those who still think that science can be hostile to a spiritual view do not understand these implications. Physics gives us exact knowledge because it is based on exact measurements. But tha law of relativity shows that measurement is not absolute, it differs according to the standard used. Thus, the force of a moving body is differently estimated by observers who happen to be moving at different speeds. "Thus the supposed forces cannot have a real objective existence; they are seen to be mere mental constructswhich we make for ourselves in our efforts to understand the workings of nature." No one claims that the four-dimensional curved space of modern science is a reality, but it is accepted as a convenient device for giving a connected and systematic account of the movements of heavenly objects. That is theattitude of modern science, it does not offer or even attempt any explanation or interpretation of happenlngs in the world, "it has now for its single aim the discovery of the laws to which these happenings conform - the pattern of events." But how long can science remain satisfied with this attitude? Its very foundation is the urge in man's minds to know the nature of reality and it started with the object of interpreting all things and all events in the world. In the past century, it thought that it had found themethod of knowing and interpreting everything in terms of material forces, and so it became definitelybostlie to spirituality; now it finds that nothing can

be explained in that way and it cannot stop there; its very urge for knowledge will take it beyond its narrow limits and it will find its fulfilment in being a branch of integral spiritual philosophy; it will investigate from the side of matter what spiritual philosophy will deduce from the side of spirit and each will find its fulfilment in the other. That trend of science has aiready begun as we find in the attempts of scientists like Dr. Hermann Weyl in Germany, Sir J. C. Bose in India and Sir James Jeans and Sir A. Eddinston in England.

And this reconciliation and union of science and spirituality is possible, nay, inevitable, as both are based on experience. "The Indian mind." says Sri Aurobindo, "does not admit that the only possible test of values or of reality is the scientific test of scrutiny of physical Nature or the every-day normal facts of our psychology. What are the tests of these ordinary or objective values? Evidently experience, experimental analysis and synthesis, reason and intuition.for I believe the value of intuition is admitted nowa-days by modern philosophy and science. The tests of this other order of truth are the same, experience, experimental analysis and synthesis, reason and intuition; only, since these things are truths of the soul and spirit, it must necessarily be a psychological and spiritual experience, a psychological and psychophysical experimentation, analysis and synthesis, a large intuition, which looks into higher realms and realities and possibilities of being, a reason which admits something beyond itself, looks upward to the supra-rational, tries to give as far as may be an account of it to the human intelligence. Yoga is nothing but a well-tested means of opening up the greater realms of experience" ("A Defence of Indian Culture"). Science will find the solutions of its riddles in the truths ascertained by Yoga; Yoga will find verifications of its truths in the Investigations of science. Of course, Yogic spiritual truths cannot, in the nature of things, be tested by physical scientific methods, but they furnish a basis on which a reasonable explanation can be found of the "pattern of events" which science is discovering by its own methods, and that is how there can be an integration of science and spirituality.

#### YOGA, MORALITY AND RELIGION

Yogic experience reveals that man is not limited to his mind, life and body, they only constitute his superficial being, a mere wave of the sea which, in its ultimate truth, is the Infinite. At present man is living in ignorance of his true being; that is why his life is full of imperfections and limitations which are at the root of all his sufferings and troubles. Behind his mind, life and body there is his soul, which is a portion of the Divine in him; in our outer consciousness we have lost touch with our inner being and with God who is seated in the heart of all creatures. Yogic discipline supplies us with the technique of recovering our union with the Self and the Divine.

"This Self is always to be won; he is won by truth and self-discipline, he is won by a perfect and entire knowledge, he is won by divine living; for He is here bright and lumiflous in the inner body whom strivers and seeker by the waning of human defects behold" ("Mundaka Upanishad," III/I, Sri Aurobindo's translation). When that is accomplished, when we are in direct union with the soul and our outer life and action is controlled by the divine power and light and biss inherent in it, human life begins to shed off all its limitations and even in this material body we attain to divine peace and light and power and loy. That is immortality or God-life to which humanity has been aspliring since the dawn of its civilization.

This truth of the Spirit was temporarily obscured by the materialistic age out of which we are now emerging "painfully"; it is not that that age has not contributed greatly to the building up of the outer life of man. But now is the time to find the Inner basis on which alone the outer life can attain its perfect fulfilment. The whole nature of man must be changed and transformed before there can be a really new order of the world, and this cannot be accomplished, as it is being attempted, merely by preaching and propaganda, but, as is being more and more recognised even in the materialistic West, only by a thorough-going psychological discipline based on the deepest knowledge of the Spirit. It is this knowledge of the Spirit which is the true heritage of India and the whole world is waiting to receive it from her. This knowledge is different from what the West, when it tries to rise above the crude level of "Do what you will", considers the key to life's problem - namely, the governance of life according to certain mental rules and principles supposed to be eternal and categorical. Thus the Pope observes: "The profound and ultimate root of the present evils is the refusal to accept a standard of universal morality for the life of the individual, for social life and for international relations-that is disregard and forgetfulness of the natural laws whose foundation is in God. After denial of God comes denial of the law. From religious and moral agnosticism spring the pernicious errors of the age." But where is the moral standard which is universal? The very fact that the modern mind is vigorously rejecting standards so long recognised as universal and eternal shows that there is no absoluteness in them. History also teaches us the same thing. Moral and social codes have differed in different ages and in different countries. Thus the Greeks had a high mental and moral culture which suffered an eclipse in the Middle Ages; then came Christianity introducing a new moral code and reshaping men's views as to the meaning and purpose of life. But after two thousand years of sway over a great part of the world. Christianity has been found wanting; it has lost the allegiance of people on account of its "obvious inability to cope with the crisis of our times." True spirituality does not claim universal validity for any moral rule or religious creed or dogma; it aims at bringing about a fundamental change of consciousness so that men may spontaneously follow the good, the true, the beautiful. As already pointed out earlier, moral rules which prescribe certain modes of action and religion which lays down certain modes of prayer and worship and the performance of certain rites and ceremonles do not by themselves constitute spirituality, though they can,

when followed in the right spirit, prepare the mind and heart for rising into the higher spiritual consciousness.

Mahatma Gandhi recently said that the reai authority was the dictates of the heart, which he would call God or Truth. But the human heart, until it is chastened and transformed, does not and cannot give us the truth and it is certainly not God. In many people the heart is not yet developed, in others it is deformed and distorted by ignorant prejudices and passions. It is well-known that Hitler listened to an inner voice which guided all his activities; the colossai destruction and human suffering caused by Hitlerite Germany and the terrible doom that she has brought upon herself leave no doubt that the inner voice which guided Hitler was the voice of the Devil, There are so many evil forces active in the world posing as the Divine that it is never safe to depend on the inner voice until one has purified one's heart and mind and come into direct conscious contact with the inner Divine, and this can only be done by Yogic practice. Raja-Yoga as described by Patanjali, which was a typical Yoga in ancient India and has had many followers in recent times even among Western people, divides Yogic practice into eight successive and welldefined stages or steps of which the first and most preliminary two steps are Yama and Niyama. Yama consists in abstalning from injury to any life, from faisehood, theft, incontinence and avarice. Niyama consists in purity, contentment, austerity, study of the scriptures and worship of God. It is clear Yama comprises what we call Morality, and Niyama comprises what is called Religion. Prayer to God, worship, observance of various rites and ceremonies are all included in the last Niyama, 'Isvara-pranidhana'. These, however, are regarded as 'vahiranga' or external and preliminary means; the real Yoga consists of the last three steps 'dharana', 'dhyana' and 'samadhi', which denote what we call meditation and concentration. It is by a steady practice of these that one can silence his external consciousness and enter into a direct communion with the Self. For advanced sadhaks, the preliminary steps are not necessary; only two things are prescribed for them, 'abhyasa' and 'valragya', the practice of concentration and the giving up of all attachment not only to objects of vitai desires but also to ali mentai ideas and idealisms, 'sarvadharman paritajya' as the Gita says. A person may strictly follow moral rules and be regular in his religious practices, he will be regarded as a man of character and a religious person, but uniess he enters into the inner practices of Yoga he will never find the Spirit or the Divine within him and thus enter into the true spiritual consciousness and spiritual life. He will not be a Yogi or a person consciously united with the Divine. As religion and moral rules are intended for preliminary discipline and preparation, people should be given as much free choice in these matters as possible. That is why Nature has evolved so many varieties of religlon and moral codes to suit the nature, temperament and capacities of different peoples in different ages. Hinduism had a firm grasp of this truth and allowed different modes of worship to different

peoples; indeed it is not a specific religion like Islamor Christianty, it is rather a confederacy of many religions and is ready to admit into its fold all thereligions of the world. It is this catholicity of Hinduism which has enabled it to make such remarkableprogress in supituality.

#### SPIRITUALITY AND NATURE'S PLANNING

Nowhere else in the world the technique of Yoga and spirituality has been so fully investigated and systematised as it has been done for thousands of years in India, even at the expense of her outer organisation of life, and it is this which the whole world has to learn from India today, even as she has to learn and accept much from the West in order to build up an efficient outer life. But as long as India remains a house divided against itself and under a foreign domination, she cannot effectively serve as a path-finder for others. It is not merely by preaching spirituality but by the practice of a higher spiritual life that India can become a model of freedom and unity firmly founded on a spiritnai basis. The problem of the unity of India is essentially the probiem of finding a goal, a lofty ideal which all Indians can accept as their own and practically follow in their life. And that goal is found in the spiritual ideal understood in its true sense and its present and future implications. We talk of planning for India, but is it such a new thing? Did not the Vedic Rishls of India pian for her thousands of years ago? That plan has moulded not only the minds of the Indian people but also the very atmosphere of the country in a particular manner which distinguishes her from other countries in the world. No planning can succeed in India unless it takes up the line which India has been following faithfully for millenniums. It is not only those who are called the Hindus, but all who have made India their home and lived herefor some time that inevitably get the spiritual mentality and any planning to be successful here must take that as its basis.

Again, not only India but Nature herself has a mighty plan. Physical science, for its very existence. has to admit that Nature is rational, and to be rational means to have a purpose, a plan and no pianning either in India or any other part of the world can have any deep and lasting result unless it is fundamentally based on the plan of Nature. Humanity has sufficiently advanced to know and understand Nature's planning, at least in its broad outlines, and it is by consciously and deliberately cooperating with Nature's plan that man can really make progress towards a higher order of life. Sri Aurobindo's integral Yoga is based on a firm grasp of this truth and all humanity must eventually accept it if it is not to be wiped out as an evolutionary failure.

As a matter of fact, Nature's planning has not only been discovered but it has been generally accepted — it is a plan of the evolution of higher forms of life from lower forms, and the highest forms of life from lower forms, and the highest forms of arreached in Nature's evolution is man. And there is nothing to justify the view that man, as he is now, is Nature's highest possible product, and that terres-

trial evolution is going to end and stop with him. "Upwards goes our way from species to super-species," so taught Nietzche, the German prophet of supermanhood, and there he gave in a nutshell the whole plan of Nature and the meaning of earthly life:

"I teach you the Superman. Man is something that is to be surpassed. What have you done to surpass man? All beings have created something beyond themselves; and ye want to be the ebb of that great tide, and would rather go back to the beast than surpass man?...

#### "Lo, I teach you the Superman.

"The Superman is the meaning of the earth. Let your will say: The Superman shall be the meaning of the earth. Upward goes our way from species to superspecies."

Since Nietzsehe this message of the superman has caught the imagination of humanity. The very term "super" has become so popular - super-tank. super-fortress, super-vitamin; the decisions of the Crimean Conference were characterised by the German leaders as super-Versailles. In philosophy, in literature, in science, in art, even in politics and sociology we find the idea of the superman working from behind, if not coming to the front. The Theoosphists are speaking of the coming of a new race. In the book, "The Secret of the Seif," Ichai has tried to show that the superman is the true teaching of the Koran. In delivering the Sixth Sir J. C. Bose Memoriai Lecture on "Evolution of Life Forms in Living Plants" before a distinguished audience Dr. K. P. Biswas recently observed: "In the remote future nobody knows what type of flora and fauna will come to exist on the earth. I am, however, optimistic as regards the future plant and animal life which is expected to reach a far more advanced form. Man will then, by adopting scientific and spiritual methods, be superman and live among far more beautiful trees and flowers and enjoy disease-free nutritious and better types of vegetables and delicious seedless fruits."

#### THE SUPERMAN, FALSE AND TRUE

Here there is a truth which is an integral part of Nature's planning and accepted by the awakened intellect of mankind, it is the ideal of the superman and it is this Ideal which can unite all humanity and carry it forward in its evolution. But so that the ideal may be universally accepted, it has to be cleared of all misconceptions and presented in its true light. Thus, it is a gross misconception to suppose that the superman will come only out of a particular religion or a particular race; It is man irrespective of caste. creed or colour who is destined to be the superman. Nietzsche was quite right in exhorting men to sacrifice everything and stake their all so that the superman might appear on the earth. But he conceived the superman to be the embodiment of ruthless power. Perhaps it was his German heritage which thus clouded his prophetic vision and be made a new valuation of moral ideas, saying: "Good is all that enhances the feeling of power, the will to

power and power itself. Evil is all that proceeds from weakness." He regarded pity, compassion, fellow-feeling as weaknesses to be discarded relentlessly. We now see how Nazi Germany realised this ideal in practice and what a stupendous disaster it brought to the world. We see Nietzsche's Superman realised in Hitler, the personification of ruthless egoistic power raised to superhuman proportions, Hitler reminds us of Nietzsche's own saying, "Ye would call my Superman a devil?" Power is a spiritual force and as such will be found in the superman in the highest degree. But compassion also is a divine attribute. "There is a divine compassion." says Sri Aurobindo "which descends to us from on high and for the man whose nature does not possess it, is not east in its mould, to pretend to be the superior man, the master man or the superman is a foliy and an insolence, for he alone is the superman who manifests the highest nature of the Godhead in humanity" ("Essays on the Gita"). Perhaps it was inevitable that false types should come as a warning to humanity before the true superman might appear who would embody in a human frame the divine attributes of Light, Peace, Power, Knowledge, Love, Beauty and Bliss,

But how is this going to be realised? In Europe It is supposed that science will produce the superman, a perfect mind and heart in a perfected body. In a series of broadcast talks in Britain recently given by a group of distinguished scientists (Huxley, Haldane, Wells and others) they discussed the application of the latest discoveries in blology to the life of man. The idea was forcefully expressed in the 70's of the last century in Bulwar Lytton's novel. "The Coming Race". That race got phenomenal power from Vril which was an electric essence of some kind. Vril of the novel was rather like a liquid version of the Philosopher's Stone, a super-Vitamin. In our time Aldous Huxley took up the same theme in his "Brave New World", and making a mess of Eastern and Western thought, replaced Vril by the Soma wine of the Vedic Rishis of India. But Soma wine of the Vedas was not really a wine prepared out of the soma plant, though such a wine might have been In vogue at that time. The Vedic Rishis took the some wine as a symbol of the Ananda or Bliss which uoderlies, the world play. "From Ananda", says the Upanished, "all existences are born, by Anarda they remain in being and increase, to Ananda they depart." This Ananda which is upholding the world from behind is to be manifested in our outer life, in our mind, life and body, thus changing our mortality Into Immortal Bliss. The soma wine represents essentially the cuit of spiritual consciousness and spiritual force, the very core of which is bliss; the cult of the transformation of human life by spiritua-

#### SRI AUROBINDO'S INTEGRAL YOGA

The technique of such transformation is what we know as Yoga, and in India It has been practised and experimented with in various forms throughout the ages. Sri Aurobinde's Yoga is a great and unique synthesis of all these systems, it has united them all

on the basis of essential principles common to all of them. This is not the place to enter into a detailed description of Sri Aurobindo's Yoga; suffice it to say that though it is based on the ancient systems, it is not a merc repetition of any of them but an evolution intended to meet the present needs of mankind. We may, however, note here one capital distinction; the ancient systems presented various methods by which a man can individually attain spiritual life; all these paths are in their own way very difficult to practise and only a very few can hope to attain any success in them Sri Aurobindo's conception is that what has been achieved individually by special systems of Yoga in the past was only an indication and a preparation of what would be achieved for all mankind in the future, and this would be done by Nature herself when she took the next higher step in her evolution. Man will become superman in the natural course of evolution just as animal became man, and plant became animal in the previous stages of terrestrial evolution. The chief difference in this last step is that man will have consciously to co-operate with Nature; it will still be a process of Nature as man's intelligence and his higher consciousness are themsiaves products of natural evolution intended to lead it to the next higher stage. This process of cooperation is to be found in the spiritual psychological discipline which India has been perfecting for millenniums, even neglecting the organisation of her outer life, and this discipline has been further systematised and perfected in the integral Yoga of Sn Aurobindo.

Distinguished Professors of Phliosophy in India are adopting Srl Aurobindo's view of spiritual evolution in order to meet the usual modernist criticism of spirituality that it is not progressive and scientific. Thus, addressing a crowded gathering at the Indian Chamber of Commerce Hail, Sir Sarvapalii Radhakrishnan recentiy observed; "Matter has grown Into consciousness, consciousness into animal variety and unimal variety has resulted in self-consciousness in human being. It is the scientific outlook that reveals to us that the whole world is in a state of evolution, from matter to life, from life to consciousness, from consciousness to self-consciousness. Man is also to evolve, to grow into a larger consciousness. This transformation calls forth a discipline in man and this discipline is supplied by religion (spirituality)." If man is to remain in his present mental consciousness, the highest consciousness as yet developed on the earth, there can be no final solution of the problems of life and attempts to rld lt of evil and suffering will be somewhat a value labour like that of trying to straighten the tail of a dog. It is the perception of this imperfect nature of human life and human consciousness that led spiritual endeavour in the past to withdraw from life and activity in the world altogether and to find peace and bliss in the pure consciousness of the Self or Purusha. The creative vision of Sri Aurobindo has brought a fresh outlook on spiritual endeavour. One has to give up all obsessing attachment to the present mental, vital and physical movements and habits and turn inward to find the Self or Spirit within oneself. By finding the Self and

living in the sllence and bliss of the spiritual consciousness one becomes the spiritual man; but that, according to Sri Aurobindo, is only the first step towards the gnostic being or the superman. The next step is to call the higher divine Force into our mind, life and body to effectuate their transformation and realise a higher divine life on the earth. "The spiritual man is one who has discovered his soul; he has found his self and lives in that, is consclous of it, has the joy of it; he needs nothing external for his completeness of existence. The gnostic being starting from this new basis takes up our ignorant becoming and turns it into a luminous becoming of knowledge and a realised power of being." The transformation of man into superman cannot be achieved by mere religious discipline or spiritual effort; as we have said above, it is Nature which will lead man to that consummation, and here by Nature we do not mean the inconscient physical Nature apparently bound to fixed laws envisaged by physical science but the divine consciousness that is behind it, it is the divine Conscious Force, "the One whom we adore as the Mother" and who dominates all existence, manifesting the worlds out of the infinite being of the Supreme of whom it is the executive power. The cooperation, the personal effort that is required of the Individual is an unshakable faith in the supramental future of man, a fixed and unfailing aspiration, an unreserved surrender of all one is and has to the supreme Mother and a resolute rejection of all habits and movements that stand in the way of the working of the force of the Divine Mother in us. "The Mother's power and not any human endevayour and tapasya can alone rend the lld and tear the covering and shape the vessel and bring down, into this world of obscurity and falsehood and death and suffering. Truth and Light and Life divine and the immortal's Ananda" (Sri Aurobindo's "The Mother").

Here, then, is a goal, an ideal which all Indians can accept and realise in themselves, thus giving a practical lead to the rest of humanity. No other "ism" or ideology can attract the allegiance of all or of a majority of Indians and thus pave the way to her national and cultural unity which must be accomplished now if India is to survive at all. It is not that other "isms" or ideologies have absolutely no truth in them; the very fact that they are followed by some people with great enthusiasm belies such an assumption. Each "ism" has some truth in it but it ls a partial truth and ignores other aspects, and no entirely satisfactory and lasting structure can be built upon It. Truth is complex and many-sided and cannot be expressed in simple slogans which readily appeal to unthinking people. Only that ideology can be accepted as true which recognises the element of truth that is there in other slogans and ideals and finds a place for it in a complex whole. Sri Aurobindo's ideai of spirituality gives us such an Integral vision and total truth, and it can serve as an effective basis not only of Indian unity but of the unity of all mankind which is so urgently needed at the present moment. The Russian delegates to the World Trade Union Congress recently held in London aptly observed: "We are not attending the

conference as propagandists. We want world unity, because we feel that without it there is little hope of lasting peace."

### SRI AUROBINDO AND THE CURRENT IDEOLOGIES (1) Marxism

India is rent today with many conflicting ideologes. One that has caught the imagination of many of our young people is Marxism. But in their enthuslasm for the bold social experiment in Soviet Russia, they blind themselves to its fatal defects. As a matter of fact, the Marxist advocacy of violence, suppression of the Individual and athelsm has made Bolshevism a terror to the nearest neighbours of Russla, and we know how Hitler, in his sinster designs on Europe and the world, exploited this terror. The achievement of Bolshevism in breaking up the Czarist regime and improving the condition of the people has been very great, but all these could have been done without going to the extremes of Marxism. Czarist Russia accepted Bolshevism though not without much poignant struggle; but Rosa Luxemberg, a friend and colleague of Lenin, did not succeed in inducing the German workers to accept it. Nelther in economy nor in culture Russia has been able to achieve anything distinctly superior to what has been done in other advanced countries in Europe and America; It has not been able to raise human life to a higher level and bring any radical change in human nature which, as we have seen above, can be done only by spirituality which is banned by Marxism. And to repeat the Sovict experiment in India would be courting the greatest disaster. The whole trend of Indian culture has been spiritual and you cannot wine out the great past of a great people. Let us make a proper valuation of the Soviet experiment and intelligently accept all that is valuable in it. Poverty must be completely abolished and the exploitation of one class by another must cease for good and every man and woman, irrespective of caste or creed, must be given the fullest opportunity to develop his or her possibilities; all these can be fully achieved through spiritual means and are envisaged in the ideal of Sri Aurobindo. India even in recent times has proved the falsity of the Marxist adage, "Religion is the oplate of the people." The Swadeshi movement in Bengal which brought about the national re-awakening throughout India got its Inspiration from Dakshinesvar, from the spiritual teaching of Ramakrishna and Vivekananda; all the lcaders of that pioneer movement were disciples of spiritual Gurus. And here In Srl Aurobindo's Asram today we see how scientists, philosophers, poets, artists are finding the spiritual atmosphere most suitable and congenial to the growth of their creative faculties.

#### (2) Khadlsm

Another Ideology which is claiming the allegiance of the Indian people today is what we can for convenience call Khadism as the Charka, has been adopted as its emblem and symbol; it has three main features — non-violence, poverty and purification through suffering. But though it is serving as a sort of corrective to other extremist tendencies,

we cannot accept it as a satisfactory ideal. Nonviolence is a typical moral rule, a 'Yama' of Patanjili; it can never be fully effective in itself, for until our nature is changed and transformed we can never be wholly non-violent in thought, word and deed as is required by the ideal. As Arjuna said in the Gita, "But what Is this In us that derives a man to sin, as if by force, even against his own struggling will?" Krishna replied, "This is desire and the companion. of desire, wrath. Until these great enemies are conquered and siair, by Yogic practice, no man can ever be seeure from violence and sin. Pandit Jawaharlai Nchru was undergoing a term of Imprisonment when he read in the papers that his old mother had been wounded a few days before in a lathi charge made by the police to disperse an angry crowd. About this incident he thus writes in his famous "Autoblography": "The thought of my frail old mother lying bleeding on the dusty road obsessed me, and I wondered how I would have behaved if I had been there, how far would my non-violence have carried me? Not very far, for that sight would have made me forget the long lesson I had tried to learn for more than a dozen years, and I would have recked little of the consequences personal or national." After this frank confession by Nchru. would it not be the utmost folly and even madness to talk of non-violence in politics and mass movement?

Another thing for which Khadi stands is poverty, for the charka cannot come back to stay unless all milis and, therefore, all industrialisation are completely abolished and that in these days means utter destitution and poverty. It is being sponsored in the belief that such a poverty is essential for the highest well-being and spirituality of man. The only remark we want to make here is that this is the Christlan ideal never followed by the Christan world in practice; poverty is neither essential for spiritual life nor has it ever been followed as a national ideal in India. And for modern India, to follow this erced is to invite sure death and destruction. Connected with this is the belief that suffering is a potent means of self-purification. If that had been the case, all starving people in the world and all jailbirds would have become saints by this time. In a speech on the Independence day, Gandhiji is reported to have said, "True happiness lies only in the womb of unhappiness." That is directly against the teaching of the Upanishads that unhapplness is only there in our superficial consciousness, the core of life is Ananda or Bliss and to manifest that even in our outer life and outer consciousness is the goal of humanity.

#### (3) Medievalism

Another great stumbling block in the path of India's forward march is medievalism; it consists in clinging obstinately to outworn creeds and 'dharmas' in religion and to social customs which have lost their utility even if they had any in past times. This is at the root of Hindu-Muslim conflict in India and such evil customs as untouchability which are cating

into the vitals of Indian life. The remedy is to find a higher spiritual ideal in which all religions will find their own fulfilment and which will show the effective path to a higher and better status of social life. Such an ideal we find delineated with profundity and comprehensiveness in Sri Aurobind's great book, "The Life Divine". As in its basis it is in harmony with the teachings of the Vedas and the Upanishads, it will be readily accepted by the Hindus all over India. From the side of Christianity it has been halled as the greatest book of our age by the late Sir Francis Younghusband who observed: "The Life Divine' could not have appeared at a more opportune moment," From the side of Islam it is worth quoting the following observations made by a distinguished Professor of Islamic Philosophy: "I was overjoyed to find over again the corroborations of the great truths of higher Sufism in this profound message of Sri Aurobindo demonstrating once more the Unity and Universality of all real Religions. Creeds contend but the Vision of Truth unites .. One of the soul-satisfying aspects of Sri Aurobindo's book is that he expounds a Mysticism which seeks not to mystify but to clarify. The latest achievements of Physics as well as Psychology are accepted as corroborations, even atheism is accepted as a passing phase in the evolution of the Spirit. . Even in the darkest movements of Matter God is implicit. The material, the vital, the mental, the supramental and the spiritual are all gradations of one Being which according to the Quoran is the Aipha and Omega, the Beginning and the End, the Appearance and the Reality.. These great truths are expounded in the immortal book of Sri Aurobindo" (Prof. Khalifa A. Hakim of the Osmania University).

#### (4) Rationalism

Lastly, the modern ideal of Rationalism finds favour with many of our intellectuals; it is the cult of freeing the mind and heart from all prejudices and ignorance with the help of reason and improving the condition of man with the help of science. But human reason is an imperfect instrument and cannot give us the truth; if it removes one superstition, it creates another. Marxism and Nazism are twin children of modern Rationalition and they should serve as a warning to ali. In "Mein Kampf" Hitier deduced from reason and science all his philosophy of violence, of racial superiority, of the revival of the slavery of the darker races and of women. The very fact that a rational and scientifically minded people like the Germans accepted Hitler as a prophet is sufficient to show the danger of Rationalism. Science and industrialism can do much to remove the poverty of the people and must be accepted; but unless there are proper safeguards, that will not be an unmixed good. Japan accepted Western industrialism without safeguards, and turned into an aggressive nation. China did not accept industrialism and has nearly been smashed under Japanese tanks. The ideal of rationalistic culture and art is not sufficient; no country cultivated science more than Germany and art more than Japan and we see to what violence and brutality they could descend. As regards industrialisation, for which our rationalists are crying, they should bonder over the following observations made by Wilfred Wellock in the "New Statesmen": "The tendency of uncontrolled development has been to obliterate traditional and national differences and to sweep larger and ever larger areas of the earth into the maeistorm of industrialism, with its blatant materialism and its mania for cheap quantitative production, and finally into war. Accordingly there is some danger of the whole world rushing towards the precipice. Britain possesses no industrial control switch." This "control switch" can come only from spirituality which alone can enable man to use the machine without being mechanised by it, and it is the mission of India to teach this secret practically to the whole world. Science and art and culture can be brought to their own fulfilment and perfection only when man finds God within him and makes his outer life and action a manifestation of the inner Divine.

#### THE COMING SPIRITUAL AGE

About the coming spiritual age when man will proceed in this direction Sri Aurobindo thus wrote in the "Arya":

"It is the Kingdom of God within, the result of the finding of God not in a distant heaven but within ourselves, of which the state of society in an age of the Truth, a spiritual age, would be the result and the external figure.

"Therefore, a society which was even initially spiritualised would make the revealing and finding of the divine Seif in man the whole first aim of all its activities, its education, its knowledge, its science, its ethics, its art, its economical and political structure. As it was to some extent in the ancient Vedic times with the cuitural education of the higher classes, so it would be then with all education. It would embrace all knowledge in its scope, but would make the whole trend and aim and the permeating spirit not mere worldly efficiency, but this seifdeveloping and self-finding. It would pursue physical and psychical science not in order merely to know the world and Nature in her processes and to use them for material human ends, but to know, through and in and behind all that, God in the world and the ways of the Spirit in its masks and behind them. It would make it the aim of ethics not to establish a rule of action whether supplementary to or partially corrective of the social law, which is only the law, often clumsy and ignorant, of the pack, the herd, but to develop the divine nature in the human being. It would make it the aim of Art not merely to present images of the subjective and objective world, but to see with a vision that goes behind them and to reveal the Truth and Beauty of which they are the forms.

"It would treat in its sociology the individuals, from the saint to the criminal, not as units of a social problem to be passed through some skilfully devised machinery and either flattened into the social mould or crushed out of it, but as souls suffering and entangled in a net and to be saved, souls growing and to be encouraged to grow, souls grown from whom help and power can be drawn. The aim of its economics would be not to create a huge engine of production,

whether of the competitive or the co-operative kind, bat to give men-not only some but all men-the toy of work according to their own nature and free leisure to grow inwardly, as well as a simply rich, and beantiful life for all. And in its politics it would not regard the nations within themselves as enormous State machines with man living for the sake of the machine and worshipping it as his God and his larger self, content at the first call to kill others upon its altar and bleed there himself so that the machine may remain intact and powerful and be made ever larger, more complex and more cumbrous. Neither would it regard them in their mutual relations as noxious engiaes meant to discharge upon each other poisonous gas in peace and to rush in times of clash upon each other's hosts and unarmed peoples, full of armed men and belching shot like hostile tanks in a modern battlefield. It would regard them as group souls, God in his human collectivities, souls meant like the Individual to grow according to their own nature and by that growth to help each other to find this divine Self In the individual and the collectivity.

awakening the inner Divine compulsion of the spirit within and all the preliminary means it will use will have that for its aim. In the end it will employ chiefly, if not solely, the spiritual compulsion which even the spiritual individual can exercise on those around him, - and how much more should a spiritual society be able to do it?-that which awakens within the desire and the power to grow through one's own nature into the Divine. For the perfectly spiritualised society will be one in which, as is dreamed by the spiritual anarchist, all men will be entirely free, and it will be so because the preliminary condition will have been satisfied. In that state each man will be not a law to himself, but the law, the Divine law, because he will be a soul living in the Divinc and not an ego living mainly, if not entirely, for itself.. His life will be led by the law of his own divine nature liberated from the ego. And this is what the religious have seen with a more or less adequate intuition, but most often as in a glass darkly, that which they called and which is again beginning to be called by some who see, the kingdom of God on earth,-within in the Spirit, and therefore, for the one is the material result of the other, His kingdom without in the life of humanity" ("The Psychology of Social Development").

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This Indian Clock Manufacturing Co., Ltd -the first of its kind in India's industrial advancement was started in March 1941 under the able guidance and sincere efforts of Mr. Sunderdas, the Managing Director of the concern. The Company having passed through successfully the first phase of its history has stepped now in its next stage. The industry in the initial stage had to pass through various difficulties and shortcomings, hence special efforts had to be made to train a number of skilled workers in this Novel line unique in character, which requires minute mechanism in India's industrial history. During its present stage this Company has improved well and made a great headway and added new lines of products, viz. manufacture of Gramophone needles of various types and Paper Clips etc. The products of this industry have been patronised with appreciation by its authorised dealers through the important markets of this Country and the demand for its goods is now so heavy that it has soon to shift its workshop to a more accommodative place known as "SUNDERNAGAR" only two miles from Tatanagar Railway Station and covering about Five hundred bighas of land. With the well-planned schemes of Factory, Cottage industries, Hospital, School, Ouarters, Bungalows, Picture House, Railway Station, Post office, Banks and Market etc. this Nagar is soon likely to con- success".

vert into a modern and small Industrial centre. Raw materials such as Brass Sheets, Tin Sheets and Wires etc which are mainly required for its products are conveniently and constantly procured locally from M/s. Tatas industrial centres and other important Business Houses in India, hence the Company does not at present stand in need of importing its raw materials from foreign Countries for the purpose of the above manufacture. The financial position of the Industry is quite sound, and is becoming more and more stable with the progress and its growth. All its Share Holders, Workers, and Management are satisfied with the return of their capital, labour and efficiency. The success which the Industry has so far achieved offers a bright future for its flourishing growth and rapid advancement in the Post-War re-construction scheme. This view is very well justified by the following remarks of Desharatan Dr. Rajendra Prasad who says "I was much pleased to be taken round and shown the Workshop of the Indian Clock Manufacturing Company Limited, Jamshedpur. I saw the various parts of the Clocks being manufactured there and I am glad that we can now get a SWADESHI CLOCK manufactured entirely in India. This enterprise deserves eucouragement and I wish it all



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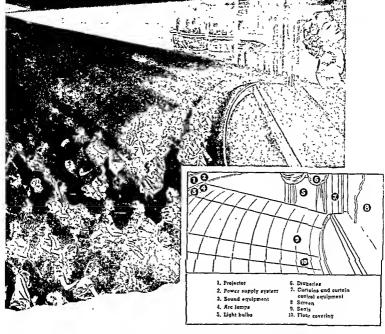
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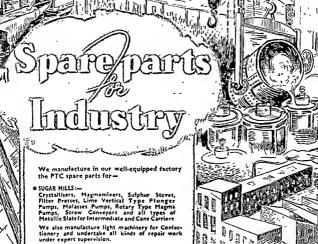
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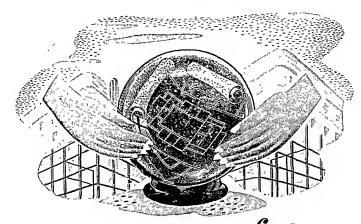
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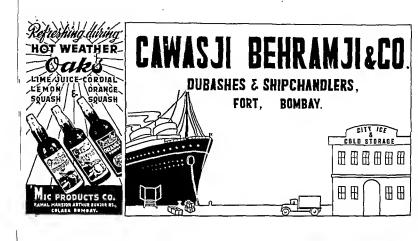
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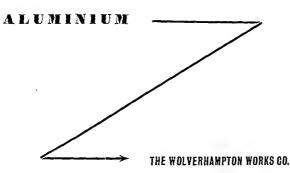
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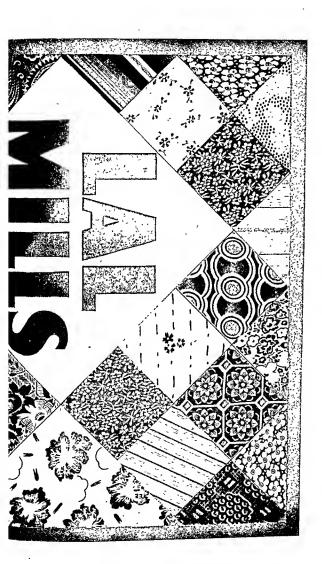
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